

Catechism, Geography, Language and Science

Third Grade

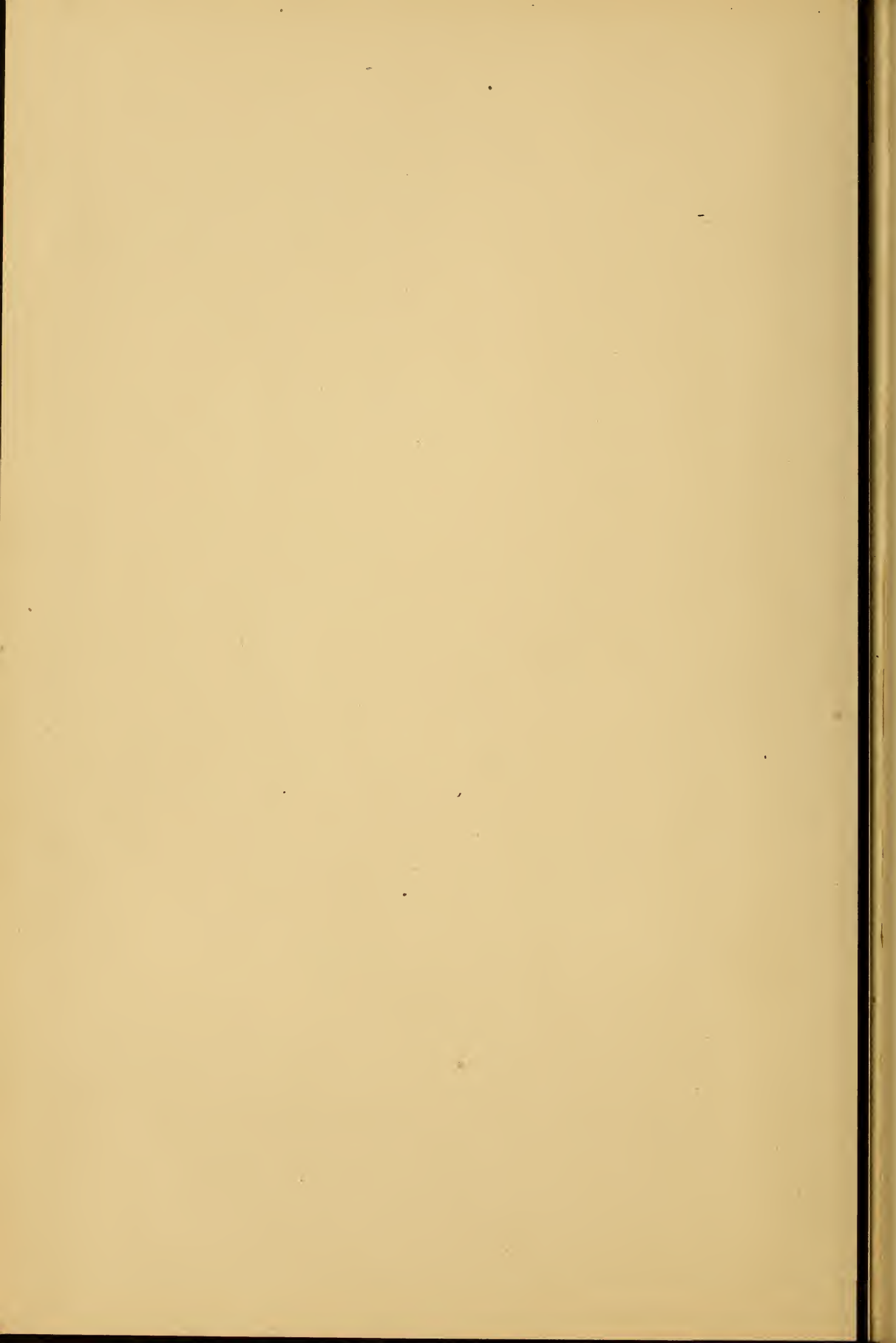


Class LT 305

Book . 36

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METHODS IN TEACHING

CATECHISM, GEOGRAPHY,
LANGUAGE and SCIENCE

OF

THIRD GRADE

Philadelphia School Course

BY

THE SISTERS OF ST. FRANCIS

GLEN RIDDLE, PA.

SECOND EDITION

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No. 1.

BUSY WORK FOR THE CATECHISM CLASS

THIRD GRADE

Exercise I.

1. For what four ends is Mass celebrated?
2. What word will help you to remember this?
3. What will you do during the first part of Mass? The second? The third? The fourth?
4. Give the commandment of the Church that refers to the hearing of Holy Mass.
5. How often did the early Christians assist at Holy Mass?
6. On which holydays does the Church command us to hear Mass?
7. On what other days should you assist at Holy Mass?
8. Why do we rise at the Gospel?
9. How do we make the sign of the cross then?
10. For what should you pray when making this sign?
11. Why do we kneel during the more solemn parts of Holy Mass?
12. How should you behave during Holy Mass?
13. For whom should you pray during Holy Mass?

Exercise II.

1. Draw a tablet and on it write the Eight Beatitudes.
2. Who said these words? To whom? Where?
3. Why should you try to remember them?

Exercise III.

1. Write the Spiritual Works of Mercy. *Refer to Drawing Book.*
2. Tell in simple words how you can observe the first of these.

Exercise IV.

1. Write the Corporal Works of Mercy.
2. Tell one way in which you can perform each of these.

Exercise V.

1. What is Advent?
2. How can you make a crib in your heart for the Infant Jesus?
3. What presents will you give the Infant Jesus during this time?
4. If you do this, what will the Divine Infant give you on Christmas?
5. Why should you love the Christmas feast?
6. When you visit the Crib on Christmas morning, what will you tell the Little Infant?

Exercise VI.

1. How long a period does Lent cover?
2. Why do we observe Lent?
3. How can you keep Lent? Tell three ways.
4. Tell three ways in which you can honor our Lord's Sacred Passion during this time.
5. Tell me in a few words what you know of our Lord's Passion.

Exercise VII.

1. What flowers appear most on the altar at Easter?
2. If you cannot buy lilies for the altar, what spiritual lily can you offer our Risen Saviour?
3. What does Easter commemorate?
4. What sad days preceded Easter?
5. What should you do on Holy Thursday?
6. What on Good Friday?
7. What greeting do people use towards one another on Easter?
8. What do you mean by the Easter Communion?

Exercise VIII.

1. What feast occurs fifty days after Easter?
2. Tell what it commemorates.
3. Where were the Apostles?
4. How long had they been there?
5. What were they doing during those days?
6. Who was with them?
7. Draw a heptagon, a *seven-sided figure*, and write on it the Gifts of the Holy Ghost. *Refer to Drawing Book.*
8. For what should you pray on Pentecost?

Exercise IX.

1. Whom does the Church honor during the month of March?
2. What ejaculation should you say during this month?
3. How are you going to honor the saint of the month?

Exercise X.

1. The month of May reminds us of whom?
2. How can you show that you love your Heavenly Mother?
3. Why should you love her?
4. Write one ejaculation you say to her daily?
5. What two saints loved our Blessed Lady especially?

Exercise XI.

1. What picture will you be sure to have in your bedroom during June?
2. What ejaculation will you say every evening?
3. Who spread the devotion to the Sacred Heart of Jesus?
4. How can you honor the Sacred Heart?

Exercise XII.

1. What month is dedicated to the Holy Angels?
2. Do you honor your angel daily? How?
3. Who created the angels?
4. Did all the angels remain good?
5. Which angel came to our Lady?
6. Which angel went with Tobias?

Exercise XIII.

1. Who is your patron saint?
2. Tell me something about her (*him*).
3. Do you pray to her (*him*) daily?
4. For what virtue was she (*he*) noted?
5. Why is she (*he*) your patron?

Exercise XIV.

1. What should you do when you meet the priest on the street? Why?
2. Why should you honor the priest?
3. How should you behave in church?
4. Why should you act thus in church?

Exercise XV.

Draw a cross made up of seven squares and in each of the six squares write what God created on each day. Write in the 7th a word that will tell what God did on the 7th day. *Refer to Drawing Book.*

Exercise XVI.

1. Of what does the word Paradise remind you?
2. Who and what were in Paradise?
3. What lesson should we learn from the fall of our first parents?
4. Who were Cain and Abel? Which one was good? Which wicked?
5. What did Abel offer to God?
6. What did Cain offer to God?
7. What was wrong with Cain's gift?
8. What does this teach us?
9. What did Cain do to Abel? Why?
10. What son was given to Adam and Eve in place of Abel?

Exercise XVII.

1. Draw the ark. *Refer to Drawing Book.*
2. Who went into the Ark?

3. Why did they go in?
4. Where did the Ark rest?
5. What bird did Noah first send out?
6. Why did it not return?
7. What bird was sent next?
8. Did it return? Why?
9. What did Noah do when he came out of the Ark?
10. What does the rainbow tell us?

Exercise XVIII.

FILL IN BLANKS.

obeyed	Sara	father
son	Abraham	Isaac
show	Canaan	victim
angel	good	land
God	people	sacrifice
father's	ram	bushes
Lot		

1. lived at Haran.
2. He was very and God told him to come out from his and his house into the that He would him.
3. Abraham and God led him to
4. was Abraham's wife.
5. His nephew's name was
6. God promised a
7. This son's name was
8. God commanded Abraham to his son.
9. Isaac asked his where the was, and Abraham said would provide it.
10. Abraham God, and then God sent an to show him a sticking in the

Exercise XIX.

1. Of what does the name Joseph remind you?
2. Whose son was he?
3. How many brothers had he?
4. Of what do you think when you see the words "*coat of many colors*"?
5. Who sold Joseph? Where did he then go?
6. Why was he put into prison?
7. How did he become great?
8. How did he treat his brothers when they came for corn?
9. What lesson does the story of Joseph teach you?
10. How can you do as he did?

Exercise XX.

FILL IN BLANKS.

plagues	taught	sins
Pharaoh	ten	Red
God	drowned	bush
burning	forty years	lead
Paschal Lamb	commandments	them
Israelites	bulrushes	death
Sinai	people	was sorry
forty	Moses	manna
daughter	Madian	him
save	men	Promised Land
first born	desert	

1. was hid in the by his mother.
2. Pharaoh's took him to her own palace and had him
3. Moses wished to his
4. He fled to, and lived there years.

5. appeared to Moses in the,
and told him he must the out
of Egypt.
6. would not let go.
7. God sent
8. The was a figure of our Dear Lord.
9. After the of the of all the Egyp-
tians, Pharaoh let the go.
10. Pharaoh afterwards and followed them, but
he and his were in the
Sea.
11. God fed the in the with
12. God gave them the on Mt.
13. Because of their the Israelites were com-
pelled to wander in the
14. Moses never entered the

Exercise XXI.

1. Where did the vision of Zachary take place?
2. What office did Zachary hold?
3. What did the angel tell him?
4. Did Zachary believe the words of the angel?
5. What then happened?
6. Who was the spouse of Zachary?

Exercise XXII.

1. What feast do we celebrate on March 25th?
2. What was our Blessed Lady doing when the angel
came?
3. What did the angel say to our Blessed Lady?
4. What did our Blessed Mother say?

5. What prayer contains the words of the angel and our Blessed Mother?
6. What prayer should you say when the bell rings at 6 o'clock and 12 o'clock?
7. How should you always say this prayer?
8. Write the Hail Mary.

Exercise XXIII.

FILL IN THE BLANKS

ox	David	Mary
Him	Bethlehem	Dear Lord
Infant	Him	stable
Blessed	adored	shelter
born	inns	Mother
Joseph	room	St. Joseph
manger		

1. Mary and went down to to be enrolled.
2. Bethlehem was the city of
3. There was no for them in the
4. and Joseph sought refuge in a
5. Would you have refused to our Blessed and?
6. When do you also act as did the inhabitants of Bethlehem?
7. Here our was
8. Our Mother placed in a
9. Mary and Joseph the Jesus.
10. The and the ass warmed with their breath.

Exercise XXIV.

1. How did the Shepherds know that Jesus was born?
2. Where were the Shepherds?

3. What did they do when they received the glad tidings?
4. How were they to know the Savior?
5. Were Mary and Joseph glad to see the Shepherds?
6. What do you think the Shepherds did when they came to the stable?
7. What would you have done?
8. Why do you think the Shepherds were the first called to the Manger?

Exercise XXV.

1. When was our Infant Savior circumcised?
2. What name was given to Him then?
3. What does Jesus mean?
4. What must you do when you say this Holy Name?
5. How should you say it?
6. When is the feast of the Holy Name?
7. Write an ejaculation containing this Holy Name.

Exercise XXVI.

1. Give in your own words the story of the Presentation of our Lord in the Temple.
2. What feast honors the Presentation?
3. What other name has this feast?
4. When does it occur?
5. What offering did our Lady make at her Purification?
6. Why are candles blessed on this day?

Exercise XXVII.

1. Who were the Magi?
2. What led them?
3. Tell what occurred to them in Jerusalem.

4. What did they do on entering the cave where Jesus was?
5. What did they offer?
6. Tell what each gift meant.
Gold meant that Jesus was a King; incense meant that He was God; myrrh meant that he was Man and could suffer.
7. Which gift honored Jesus as King? *Gold.*
8. Which honored Jesus as God? *Incense.*
9. Which honored Jesus as Man? *Myrrh.*
10. What can you offer as gold? as myrrh? as frank-incense? *Love, sufferings, prayer.*
11. What feast honors this coming of the Wise Men? *The feast of the Epiphany.*

Exercise XXVIII.

1. When the Magi left Bethlehem, where did they go?
2. Did they go through Jerusalem again? Give reason for your answer.
3. What did Herod do when the Wise Men failed to return?
4. Why did St. Joseph take the Child and His Mother to Egypt?
5. Where is Egypt? Were the inhabitants of Egypt Jews?
6. When does the Church honor the Holy Innocents? Why?
7. How long did the Holy Family remain in Egypt?
8. Where did they then go?
9. Can you imitate them, or learn any lesson from them?

Exercise XXIX.

1. Where did Jesus go when He was twelve years old?
2. Did Jesus return with His parents? What did He do?
3. Why did St. Joseph and our Blessed Mother not miss Jesus at once?
4. What words did Mary use to Jesus when she found Him?
5. What did Jesus answer? What did He then do?
6. Tell what lessons Jesus taught us by remaining thus in the Temple.

Exercise XXX.

Draw a tablet, place in it in proper order the events of the *Childhood of Jesus*.

Exercise XXXI.

1. Give the first event of the public life of Jesus.
2. What happened when our Lord was baptized?
3. Where did this baptism take place?
4. Where did our Dear Lord go after His baptism? What did He do?
5. How often was Jesus tempted?

Exercise XXXII.

SUPPLY WORDS IN THE FOLLOWING BLANKS:—

wish	Lady's	first
miracle	changed	went
feast	trust	sermon
Cana	wine	Eight

1. With His new disciples, Jesus to a marriage
..... at in Galilee.

2. Here. at the of our Lady, Jesus water into
3. This was his public
4. This leads us to have in our intercession.
5. In the on the Mount, Jesus speaks of the Beatitudes.

Exercise XXXIII

1. Where did the Transfiguration take place?
2. Whom did Jesus take with Him?
3. What change appeared in Jesus?
4. What effect had this on the three Apostles?
5. What did St. Peter say, or suggest to Jesus?

Exercise XXXIV.

1. Why do you love the picture "Christ Blessing the Children"?
2. Did our Lord love little children?
3. What did Jesus say to the Apostles when they tried to prevent the children from coming?
4. If Jesus so loves children, what should we do?

Exercise XXXV.

Make a drawing to show the Holy of Holies, the Holy Place, and the Court of the Priests. Write in each part its appropriate name. *See Drawing Book.*

Exercise XXXVI.

By supplying words in these blanks, complete the formula which will help you to remember the four principal mysteries every one must know.

Heaven	wicked	three
God	died	one
reward	us	man
Person	Son	Son
Holy Ghost	Father	eternity
between		

1. I believe there is but God.
2. In one there are Persons, the,
the, and the
3. God, the, the Second, was made
and to save
4. God will the good in, and punish the
..... in hell for all

Exercise XXXVII.

1. What must you do before you examine your conscience
for Confession?
2. Whom will you ask to assist you to make a good Con-
fession?
3. What will you do after Confession?
4. What will best show that you are really sorry for the
sins you have confessed?
5. How should you act or behave the evening before a
Communion day?
6. What acts should be made before *Holy Communion*?

Exercise XXXVIII.

1. Who dwells in our *Churches* at all times?
2. Why do you visit the *Church*?
3. What do you do during your visit?
4. For what should you pray? For whom?
5. Mention any saint that especially loved *Jesus* in the *Blessed Sacrament*.

Exercise XXXIX.

1. Write the act of Faith.
2. Write the act of Love.
3. Complete the quotation that begins "Arise, and take the Child." What picture does it bring to your mind?
4. Complete the quotation "Son, why hast Thou . . . ?"
5. Who said these words? When?
6. On what occasion does the Gospel say this of Jesus, "And He went down . . . ?"
7. Complete the words of St. Luke, "And Jesus advanced in wisdom, ..."

Write one fact about each of the following:

St. Michael.

St. Patrick.

St. Agnes.

St. Rose of Lima.

St. Anthony of Padua.

Exercise XL.

Tell why we honor our Blessed Lady and in what way you can show your love for her.

SUPPLY THE MISSING WORDS.

second

man

plant

light

land

beasts

birds	dry	fifth
brings	sun	creeping
stars		

First was made;, sky and sea, ...
 and life all;

Fourth, ... and moon and of light;
, fishes and the so bright;

Sixth, ... of earth and things;

Last, ... God into being

Answers to Exercise I.

1. Mass is celebrated to adore God, to thank Him, to beg His pardon for sin, *to satisfy for sin*, and to ask Him for graces and blessings.
2. The word ACTS will help you to remember this.
A tells us *adoration*.
C tells us *contrition*.
T tells us *thanksgiving*.
S tells us *supplication*.
3. During the first part of Mass, we adore God.
 During the second part, we thank God.
 During the third part, we tell God we are sorry for our sins.
 During the fourth part, we ask God for all we need.
4. We must hear Mass on Sundays and holydays of obligation.
5. The Early Christians assisted at Mass every day.
6. The Church commands us to hear Mass on:—
 - a. The feast of the Immaculate Conception (Dec. 8).
 - b. The feast of Christmas (Dec. 25).
 - c. The feast of the Circumcision (Jan. 1).
 - d. The feast of the Ascension (40 days after Easter).

- e. The feast of the Assumption (Aug. 15).
- f. The feast of All Saints (Nov. 1).
- 7. We should assist at Holy Mass on all the feasts of our Blessed Mother, on Corpus Christi, Holy Thursday, the feast of St. Joseph, the feast of Three Kings, the feast of our patron, and on every Saturday in honor of our Lady.
- 8. We rise at the Gospel to show our respect for the word of God. We rise to show that we are ready to stand up for our faith and defend it.
- 9. We make the Sign of the Cross with the soft part of the thumb on our forehead, lips, and breast.
- 10. We should pray for grace to know the Gospel with our mind, to speak it with our lips, to love it with our hearts. (Write each in a separate sentence.)
- 11. We kneel during the more solemn parts of Mass to show our reverence for the solemn mysteries celebrated. We kneel because God is present on the altar, or because God is coming on the altar.
- 12. We should behave with great attention, reverence, and devotion.
- 13. We shall pray for our parents, brothers and sisters.
We shall pray for the Pope.
We shall pray for the poor souls.
We shall pray for the sick.
We shall pray for all mankind.

GEOGRAPHY

I. TALKS ABOUT PHILADELPHIA

PREPARATION:—Pictures of the buildings, rivers, factories, etc., of Philadelphia.

Children, today we shall speak about the city in which we live. What is the name of the city, Mary?

It is called Philadelphia.

We say we live in the city. Is there any difference between the city and the country? *Call on different children.*

The country has roads and the city has streets.

The houses are close together in the city, and in the country they are far apart.

The country is all fields. There are many trees in the country.

You can see the cows in the fields.

They have horses, pigs, cows, and chickens in the country.

Yes, all the answers are correct. But, are there no trees in the city, Anna?

Yes, here and there are trees along the streets and in the park.

Are there no fields in the city?

I have seen some fields, but not many.

What do we call the place where our flowers grow and part of which is laid out in grass?

We call it our garden.

Well our city of Philadelphia has streets, houses and gardens like any other city.

PEOPLE

Now let us speak about the people. Harry, what is the color of the people of our city?

They are white.

Have you ever seen people of any other color?

I have seen black people. NEGROES.

What work do they do?

They are hod-carriers, laborers, cooks, hotel waiters, etc.

What color are the people that dress so peculiarly and keep laundries?

They are Chinese.

Yes, but what color are they?

They are yellow.

Sometimes when the Circus comes to town, you see people of another color. Who knows what we call them?

We see Indians.

Of what color are they?

They are dark.

Yes, we say they are copper colored. Some people call them "red men".

James, tell me the different people we have mentioned.

We have mentioned Whites, Negroes, Chinese, and Indians.

Many hundreds of years ago, the Indians were the only people around this section. Then there were nothing but forests upon forests, there were no houses to be seen, no streets. The Indians lived in tents, and hunted in the forest and fished in the river.

One day a Quaker, named William Penn, came in a vessel to this spot. He came all the way from England. You have heard your parents speak of crossing the ocean coming from Europe; well Wm. Penn had come across the

ocean to settle or make a home here. He was a very kind man, and when he saw that the Indians owned the land here, he asked them to meet him one day under an elm tree. The spot where this meeting took place is in Kensington. Here Penn made a treaty with the Indians. By this we mean, he agreed to buy their land from them, and promised not to harm them. The Indians said they would be good to him and his people. The Indians kept their word, and never harmed a Quaker.

Have any of you ever seen a Quaker? *I have.*

How are they dressed?

Their dress is very plain. The men have big hats. The ladies wear plain dresses, gray shawls, and big bonnets.

Yes, and these Quakers were very quiet, peaceful people. Now when Penn had bought the land from the Indians, he began to lay out the city. He called it Philadelphia. That means "city of brotherly love." He did not want the people to forget that they were to live together like brothers.

STREETS

Penn himself made the plan for the city. He made the streets straight and broad; making squares like the squares on a checkerboard. These streets run at right angles. *Explain on board.*

Who can name some of the principal streets?

Market, Chestnut, Walnut, Broad, Front, Second, etc.

The answers will vary according to the section in which the children live.

Have many streets mentioned. Draw the plan on the board showing that First, Second, Third, run from north to south and cross Market, Chestnut, etc., which run from east to west. Ask for streets that run zigzag. *Perhaps*

some can mention *Ridge Ave.*, *Passyunk Road* and *Germanatown Ave.* as examples of zigzag streets.

Call attention to the fact that 14th Street is called Broad St., that the streets from north to south are named by numbers, those from east to west have other names.

Have the children tell you anything they know about any of the streets. This will lead up to the:

PRINCIPAL BUILDINGS

Draw attention to the City Hall, the largest building in the world for city purposes. It is at Broad and Market Sts. (The State House, Memorial Hall, Horticultural Hall, etc.) In some instances the children will mention them; in others you may have to tell them. Speak of the uses to which each building is put. Tell them about Girard College, that great home for orphan boys. Tell them that Philadelphia is called the "City of Homes"; have them tell you why it is so called. Require them to tell you all they can about the Churches.

RIVERS

You all have been in Fairmount Park, or the Park, as we call it. Who knows what river flows through the Park?

The Schuylkill.

Can you tell me anything about this river, and its scenery?

What bridges cross it?

What kind of boats can you see on its surface?

If you went to the Schuylkill in winter, what would you see?

People can skate on it in winter, for it is frozen over.

Have you ever heard of another river near Philadelphia? The Schuylkill flows into it.

I have heard of the Delaware River.

Yes, if you went down Market St. in the trolley cars, when you came to Front and Market, you would need to walk only a little distance till you came to the Delaware River.

What kind of boats would you see on this river?

Perhaps you have gone down the Delaware in a pleasure boat.

At some of the wharves you would see men carrying heavy loads on to the big vessels. Could these vessels sail on the Schuylkill River?

Which is the larger of the two rivers?

Let different children tell you anything they can about the Delaware and what they have seen on or near it.

Refer to Camden, the city opposite to Philadelphia, and the way by which a person can get to Camden.

FAIRMOUNT PARK AND THE ZOOLOGICAL GARDEN

Today I want you to tell me all you know about Fairmount Park. Who have been to the Park? Tell me what it looks like, Jennie.

It looks like the country.

To whom does it belong? Must you pay to go into the Park and enjoy yourself?

No, the park is free. It is owned by the city.

Are there streets in the Park?

No, there are roads for walking and driving.

Are there any flowers or birds there? May you pluck the flowers?

There are beautiful flowers, but you may not pluck them. I have seen birds.

What games can you play in the Park?

We can play baseball, tennis, football, etc.

Can you play these wherever you wish?

No, there are set places for it.

Let the children tell you all they can about the Park.

What large buildings in the park contain all different kinds of animals?

The Zoological gardens.

Who has ever visited the Zoological gardens?

Ask different children to tell you what they have seen there. When all have answered, tell them of the elephant and his trunk, the tall giraffe, the seal that lives in water, the lion that roars so terribly, the tiger that goes round and round his cage all day long, the large buffalo and many beautiful deer, the camel and his hump, the bear in the deep pit, the prairie dogs that run in and out of holes. Speak of the bird-houses and many beautiful birds found there, the peacock, lyre-bird, bird-of-paradise.

Tell them of the monkeys and the noise they make chattering all day long.

You can speak of the house where the snakes are kept in large glass cases.

Much of the above can be drawn from the children by apt questioning, the remainder can be supplied by the teacher. Pictures and drawings of the different animals will make the lessons more interesting.

MEMORIAL AND HORTICULTURAL HALLS

Perhaps some of the children have visited these buildings. If not, then tell the class something about them.

These two buildings were erected for the Centennial Exhibition in 1876. The United States was then 100 years old, and a great celebration was held in Philadelphia. Many

beautiful buildings were erected in Fairmount Park. These two mentioned are the only ones left, the others were torn down.

In Memorial Hall you can see many old coins, old-fashioned china and furniture, tapestry work, mosaic work and beautiful pictures. The picture of the Battle of Gettysburg is there. Many of these things were brought from other countries.

In Horticultural Hall are many curious and beautiful plants. Every one has on it a little card telling its name. A visit to the place would teach you much about plant life.

INDUSTRIES

We have spoken of our city, its people, buildings and pleasure resorts. Now we must see how the people are employed. What factories are there near our school? Answers will differ.

Ask what is made in each one mentioned.

Who can mention any other works?

Have any of you ever heard of Baldwin's? What are made there?

Locomotives are made there.

Yes, it is one of the largest locomotive works in the country.

Who has heard of Cramp's shipyard? Where is it? What are made there?

Yes, it is on the Delaware River. Steamships and war vessels are built there. It is very interesting to watch the building of these.

For what are these ships used?

They are used to carry things to different countries.

Then men are needed to man the vessel, to put the goods in, and send them away. This is a kind of work. Mention all the different industries we have in Philadelphia.

We have cotton mills, woolen mills, carpet factories, machine, boot and shoe factories, furniture factories, machine shops. locomotive works and shipyards.

REMARKS:—These lessons should be taken in succession as here given. Just how much is taken each day will depend on the class. In each case draw all that is possible from the children. Place on the board the difficult words that are needed in answering questions.

Questions

Where do you live? What does your city contain?

What kind of people do you find in your city?

What work do the Whites do?

What work do the Negroes do?

What work do the Chinese do?

Who laid out the city of Philadelphia?

What does Philadelphia mean?

From whom did Penn buy the land?

How did he treat the Indians?

What kind of streets did Penn wish in his new city?

Which are the main streets running from north to south?

Tell me some of the principal buildings of Philadelphia.

What is the City Hall? Where is it?

Where is the Old State House?

Who are in Girard College?

Tell one fact about the Cathedral.

Tell one fact about the Gesu.

On what river is Philadelphia?

Which river is the longer and deeper?
 What kind of boats would you see on the Schuylkill?
 On the Delaware?
 What is Fairmount Park?
 Write 3 sentences about the Park.
 What are kept in Memorial Hall?
 When was Memorial Hall built?
 What does Horticultural Hall contain?
 Mention some things that are made in Philadelphia.
 Where are the ships made? The locomotives?

II. TALKS ABOUT OUR OWN AND OTHER COUNTRIES

THE PEOPLE

METHOD:—In studying about our own city, we noticed there were people of different color living there. Who recalls the people to whom I refer?

We found white, black, and yellow people.

Today we shall try to learn more about these three classes of people.

WHITES

Do all the Whites look exactly alike? *Ask several children.*

No, some are darker than others. Some have dark hair and some have light hair.

Do all speak the same language?

No, some are Spanish; some Irish; some French; some American.

We see that Whites differ in appearance, and in speech, but there are some things in which all are alike, and for

which reason they are called Whites. Try to remember what I now tell you.

The white race are distinguished by their tall stature, graceful proportions and light, elastic step; their oval head and face, high forehead, symmetrical features and ruddy cheeks; their abundant beard and waving or slightly curling hair. The color of the skin varies with the climate, from white in European to tawny or swarthy in the Hindoos, Arabs, Egyptians, and Berbers, who live on the borders of the Tropical Zone. *Call on different children to repeat what you have just told them.*

The Whites are also better educated than other classes of people. You see how many schools we have in this country; every little boy and girl has a chance to learn. You have heard, too, of our having a president, a governor, a mayor, etc., and we say we have a good government.

What is the name of your country? *The United States.*

If we had a king, we would call our country a kingdom. Who rules us?

A president.

Since we have a president, what do you call our country? Does no one know?

We call it a Republic.

A republic is considered the best kind of government. The Whites have better government and laws than the Negroes.

Now have the children repeat in their own language what has been said about the Whites.

NEGROES

How can you tell a Negro from a White man?

The Negroes are very black.

They generally have black wooly hair.

They have thick lips.

The whites of their eyes show very plainly.

Yes, children, it is not simply that the Negro is black; his hair and lips tell us he is a Negro.

What work do you find the Negro doing here in Pennsylvania?

He works as a hod-carrier.

I have seen Negro policemen and letter-carriers.

Some Negroes are cooks.

Some Negroes are waiters in hotels.

The Negroes are porters on the parlor cars and at the railroad station.

All these answers are correct. If you went down South, what would you find the Negro doing?

We would see him working in the cotton fields. Show picture of field.

Do the Negroes dress like the Whites?

Are the Negroes educated?

Here tell the pupils about the condition of the Negro before the Civil War. Contrast his condition as slave with his state now. Show that every effort is being made to educate the Negro. You may touch on the prejudices that still exist in the South. There the Negroes travel in separate cars; and the Whites do not feel friendly toward them.

The Negroes were not always in the U. S. Does anyone know where they come from?

From across the ocean.

Yes, they came from a country far off, from Africa. *Show the map.* I do not mean that the Negroes now here came from Africa, but the first Negroes that came to America were brought from Africa. These poor Negroes

were coaxed to the shore, and then carried off on a vessel. The captain of this vessel brought them over to this country, and sold them as slaves to the Southern planters.

Let us take an imaginary trip to Africa, and see the Negro in his native land.

Some of the Negroes are wild savages; they even kill and eat people. These are called cannibals. These poor people do not know about God; they worship idols. They live in tents and huts made of straw. Most of their food is obtained by fishing and hunting. As they are lazy, they do not have any works, or factories as we do.

Besides they have no education. As for farming, they do enough to support life. No matter how savage the tribe is, all Negroes are fond of music. We notice this in the civilized Negroes in our country.

THE YELLOW RACE

Tell me once more about the Chinaman or Chinese that you have seen.

The Chinese have a yellow skin.

Yes, that is why they are called the Yellow Race.

They have slanting eyes.

He has a long braid—plait.

What is the plait called?

It is called a queue.

Was he dressed like the White and Negro?

He wore cotton trousers, and a jacket. They were not made like those our people wear.

What had he on his feet?

He had a kind of slipper with no back to it.

What work do they do?

They live in Chinatown and keep laundries.

Yes, but out West, they are house-servants, the same as the Negroes are in the East.

If we could pass through the earth to a point right under us, *show with globe*, we would come to a country surrounded by a high wall. This country is called China, and it is the home of the Chinese.

Here the Chinaman is dressed as we see him in our country. Here comes a little Chinese boy on his way to school; let us go with him. He carries with him a roll of rice paper, a cork of ink, and a brush. But where is his sister? Oh, in China, girls do not go to school, and as there are no free schools, only well-to-do boys can go to school.

Having reached the school, we shall enter. Our little friend makes a deep bow to his teacher and takes his place on a low stool. With his brush, he traces on the rice paper, marks which are not letters but whole words. There are 20,000, and he will be an old man before he learns them all. What a strange place this school is. Some boys are sitting on the floor, others on little stools, for there are no desks. All are reciting at the top of their voices. They begin to read a book at the last line on the last page, and read from right to left.

School is over, now we will go home with our little friend. Many people of China live on rafts in the river. But this little boy's father is rich, and lives in a large house, which is made of bright colored tiles. Soon our little boy will go out to fly his big kite. Here comes his father; will he run to meet him, and catching hold of his hand chatter all the way home? Oh no, he will make a bow, for little boys must respect their fathers.

Supper is ready. It consists mostly of rice, which is eaten with chop sticks. This little boy eats with his father

and brothers, for the women are not allowed to eat with the men.

Now call on different children to tell you something about the little Chinese boy.

There is still another race or class of people that we do not often meet, yet boys like to read about. Who thinks he knows to what I refer? Well, John?

You mean the Indians.

Yes, can you tell us anything about the Indians? their color? cheek bones? appearance? clothing? habits? where they live, etc.?

QUESTION DIFFERENT CHILDREN.

The Indian is red, or copper colored.

What does he do to his skin?

He tattoos and paints his skin with different kinds of paint.

He has a black, piercing eye.

His cheek bones are high.

His hair is coarse, black and straight.

He decorates his head with feathers and other ornaments.

He wears brightly colored blankets wrapped about him.

On his feet he wears slippers made of leather, called moccasins.

The leggings are beautifully fringed and decorated with dyed porcupine quills, beads, and teeth of animals.

Indians are very fond of shells and trinkets.

They live in tents called wigwams.

NOTE:—If any of the above points are not supplied by the children, you should either tell them in an interesting way or by questions and pictures and drawings lead the children to tell you.

Yes, children, this tent or wigwam is made by planting poles in the ground, and making these meet in a point at the top. (Show on board.) This is then covered with skins. The tent has no windows, but an opening serves as a door. The Indians like their tents as much as we do our houses.

The men are lazy and do little besides hunt and fish; the women, or squaws, till the ground, raise Indian corn, make clothing from skins of animals, weave blankets, and make head ornaments.

Have different children tell all that has been said about the Indians.

Mary, about how many races of people have we spoken today?

We have spoken of four races.

Name them.

They are the White, the Red, the Yellow, the Black.

There is still another race of people, but we shall not study about them yet.

NOTE:—If there are any supplementary books containing matter on this point, let the pupils read them and then tell what they have read.

Busy Work

Write on the board the names: *White, Yellow, Black* or *Negro, Red* or *Indian*. Require the pupils to write you other sentences besides those given in the lesson. Or ask for three sentences about each.

Other days put names on the board and have pupils write sentences for the following topics for each:—

Color of hair,

Kind of skin,

Where they live,
 Work they do,
 Their education.

Animals: Familiar, Domestic, and Wild Animals

Children, we have studied in our past lessons about the different streets of Philadelphia, the rivers, etc. Who can name the rivers? Where do these two rivers flow?

Yes, that is correct, Mary. I see you remember yet about our first lesson. We have also studied about the different kinds of people found in our city. Who can name them in rotation?

Whites, Chinese, Negroes, and Indians.

Now, today, we want to study about something else that we find in our large city of Philadelphia. I wonder who can guess what it is? No. No. Yes. Elizabeth, you are more nearly correct, but think again, and see whether there isn't something that we must have, we could hardly do without some of them. Yes, Sarah, you are right, I mean ANIMALS. I wonder why we have animals, what good are they to us? Who gave them to us?

Teresa: *God made them on the sixth day of Creation.*

Yes, that is right.

When we speak of animals we mean all kinds put together, but what special name do we give to our pet dog and cat, our faithful horse, our tame pigeon, and our goat? I am sure some one has heard the name. Think for a moment. Where do we keep them?

Mary: *In a stable, and we call them stable animals.*

Florence: *They are home animals.*

Yes, but they have another name. I am sure some of your mamas have sewing machines, and there is one ma-

chine that has on it the name I want. I am sure you have heard your mama say, "My Domestic is very old". Well now, if many of you think you have it, say it together. Unanimous is the reply of the children. *Domestic animals.*

DOMESTIC ANIMALS

Yes, all these animals around our home, and near us, we call *domestic* animals. Now why are they called domestic? Because they are tamed and petted very much, and live near our home.

Mention the principal domestic animals, and I shall write the names on the board.

Dogs, cats, horses, goats, sheep, cows, swine, ducks, geese, chickens, pigeons, canaries, parrots.

How did these animals get here? Some were here. I think you have not heard of settlements yet; but men go out to put in order, as we might call it, a large place which is yet wild, and they take with them some of the animals of their own country and in this way these animals get into different parts of the world.

Of what use are these animals, could we not get along just as well without them? That is true, we would have nothing to draw our wagons; but is the horse the only domestic animal that is of great use to us? I have some in mind that are even more useful, even necessary to sustain our life.

Who knows to which I refer?

That is right, the pig, the cow, and the chickens.

We want to hear some of the uses of these animals. Yes, the horse is used for drawing wagons and carriages. On the farm, he is of great service.

The hair of the horse is used for upholstering, and for fishing tackle. The hide is used for boots, and harnesses. The tendons are used to make glue and gelatine. The bones are used for knife-handles and buttons.

Many of the domestic animals supply us with food. Who can tell me what food?

James: *Beef, veal, lamb, mutton, pork, ham, and bacon.*

These are the principal kinds of meat that we get from animals.

There are other animals that furnish us with food for fast days, who knows which they are? They live on the farm. Yes, that is right, cows which give us butter, milk, and cheese; chickens which give us eggs.

WILD ANIMALS

Are these the only kind of animals you have ever heard of, Frank?

No, Sister, I have heard of wild animals that live in the woods.

Do they all live in the woods?

Many live in the water.

Who has ever seen a wild animal? Where?

At the circus.

Well, how could these men keep them, if they were wild?

That is true, they were somewhat tamed. The principal wild animals of the country are the deer, bear, panther, wolf, and fox.

Where do we find the most of them?

There are very many in the forests and mountains of the West.

The moose, a very large deer with broad heavy antlers, is hunted down in the woods of Maine.

Let us visit the cold countries of the North; here we find that many bold sailors have pushed up among the drifting ice and snow. There we find the reindeer, the walrus, the seal, the Arctic fox and dog, and the seabirds.

Of what use are they to the Esquimaux? What draws their wagons?

That is right, they have no wagons, they have sleighs. What a terrible noise many heavy wooden sleighs coming along the street must make.

Jennie: *They have no streets.*

What have they then?

William: *All the year, the ground is covered with snow, and they would have no use for wagons.*

Do they keep their animals in stables, as we do our horses? (No answer.)

I will tell you, there thousands and thousands of these animals roam about, but each father has his own number of dogs as they call them and they well know their master, too. They are roaming about, and when he wants them he goes out and whistles for them. Knowing his tone, they come galloping towards him.

The reindeer feed on lichens that grow there. They often roam to another place to find food and then the master must follow.

I think you all have seen a bear, but now let us hear about the bear of the West, the fierce grizzly bear that lives in the Rocky Mountains.

Some years ago the American buffalo roamed over the great plains of the West; many have been killed and now only a few remain. One of these herds is kept in Yellow-

stone Park. Some buffaloes are also found in the zoological gardens.

From what do you think we get our furs for the winter?

Yes, from animals; but what kind?

Mary: *From the beaver, mink, otter, sable, silver fox, ermine, Arctic fox.*

The mink and otter are found along the streams of the cooler regions. The seal is found off the coast of Alaska; it is the most valuable of the fur-bearing animals.

Who can tell me how these animals are caught? No, they are not shot.

The hunters set traps in the woods for many miles. In the midst of the winter, these animals come along and are caught in the traps. Now you see they are caught, and not the least harm done to the valuable fur. The poor hunters have a very hard life; sometimes a bear, or a hungry wolf comes along, and also the crafty wolverine often makes his rounds, and steals away the animals that have been caught. These fur regions are occupied by a company that has a hundred fifty posts. These posts consist in a storehouse and a few dwelling places surrounded by palisades. They are generally erected on the river so as to be easily reached.

The skins are brought in by the trappers to the various posts from which they are collected, and sent principally to London, the chief fur-market of the world.

Furs are very valuable. Thousands of hunters and trappers are engaged in the capture of fur-bearing animals.

Plants of Our Own and Other Countries

Today we are going to talk about trees. First we will take fruit trees. You name them and I shall write them.

Children: *Apple, pear, plum, peach, cherry, quince.*

Name some other trees.

Chestnut, walnut, hemlock, pine, oak, spruce, locust, ash, maple, fir, birch, poplar, beech, cedar, and willow.

We have quite a long list of names; now who can tell me anything about any of these trees?

Fred: *The chestnut tree gives us nuts and the wood is used for making furniture.*

That is right. What other tree gives us nuts and the wood of which is useful?

The walnut and beech.

Yes, the oak also bears nuts, but they are too bitter for us to eat. Some animals, however, like to eat them. Can anyone tell what these nuts are called?

Frank: *They are called acorns.*

Tell me the names of the principal trees used for building and making furniture.

Children: *Chestnut, walnut, cedar, pine, oak, hemlock, etc.*

Can you name any other uses for trees?

Charles: *Some are good for shade. The maple tree gives us maple sugar, and then some are used for Christmas trees.*

Very good. Have any of you ever heard of the trees of other countries? No? In South America they have the rubber tree. A hole is made in the trunk and the sap oozes out. This hardens and is then made into many articles which we use every day. Can you name some for me?

Then there is the cork tree. Cork is obtained in a different manner. The bark is cut and is then peeled off. This tree does not die as other trees would if they were deprived of their bark. Some little boys are very naughty and kill young trees by cutting the bark with their pocket-knives, but perhaps they do not know this will kill the trees.

Another tree of South America is called the "cow tree". It has thick leathery leaves, and the sap looks like milk. The natives gather it and give it to their children.

In Australia the trees are very peculiar, they grow very tall and the leaves are at the top. They point their edges upwards and thus give very little shade.

There are many kinds of strange trees, and many interesting things to learn about them. For your lesson next week, I want you to find some interesting fact about any tree you wish to take.

We will now speak of other plants. Name all the grains you know of that grow in this country.

Wheat, rye, oats, barley, corn, etc.

What grain is raised in the South, in the wet swampy places?

Clara: *Rice.*

What other plant grows in the South?

John: *Cotton.*

Can you tell me anything about cotton?

Mary: *The negroes do most of the work in the raising of cotton.*

Yes, they do not mind the heat as the white people do. Can you tell why or how they ever came to the South?

No answer. I will tell you. They were brought from Africa and sold to the white people. Ask your older brothers to tell you all about them, and how they were set free.

George, you may name some plants that are used as food.

Lettuce, spinach, cabbage, parsley.

Name some plants the roots of which are eaten.

Beets, onions, turnips, parsnips, carrots, horse-radish, radish.

Name some the fruit of which is eaten.

Tomato, cucumber, pumpkin.

Some the seeds of which are eaten.

Beans, peas.

Yes, and most of our spices are seeds, but we see them only after they have been ground to a fine powder.

There are hundreds of plants, too numerous to mention. Some are used as food or medicine for man, some are used as food for animals; some we have only for their beauty or fragrance, while others are poisonous and are not beautiful, but we cannot doubt but that God had a plan or use for every plant He gave us.

III. THE EARTH ON WHICH WE LIVE

METHOD:—What do we call that on which we live?

We call it the EARTH.

What is the earth?

The earth is a big ball.

Yes, we say the earth is a big ball in the heavens. It has another name. It is called a PLANET because it wanders in the heavens around the sun.

What then is a planet?

A planet is a heavenly body that turns around the sun.

On what part of the earth do we live?

We live on the outside of the earth.

Of what is the outside of the earth made?

It is made of land and water.

Who made the earth?

God made the earth.

Do we ever touch or walk on the outside of the earth?

Yes, when we go home from school and any time we walk on the ground.

What is the earth doing all the time?

The earth is moving all the time.

Why do we not fall off the earth, if it moves, and we walk on it?

Because the earth has the power of drawing every thing to itself.

MAGNETIC POWER.

That is why the earth travels around the sun.

The sun draws the earth.

Therefore, children, we understand that the earth draws the sun to itself, and the sun draws the earth.

When the sun is shining, we say it is day; when is night?

When we cannot see the sun, and it is dark.

In what part of the heaven, do we see the sun in the morning? In the evening? At noon?

What does the sun do every morning? Every evening?

In what direction does the sun travel across the sky?

The sun travels from east to west.

Years ago people thought the earth was flat, and that the sun started in the east and went across the sky to the west during the day, and at night went under the earth back again to the east where it came out or rose the next morning. They could not explain in any other way why

it was light and then dark; and how the sun could go down in the west and then come up in the east again. Now we know this is not true.

What shape do we believe the earth is? *It is round like a ball or sphere.* Let us take a ball, orange or globe, and suppose it is the earth. Stick a knitting needle or rod through it from top to bottom, or north to south. Turn the ball on this needle from your left hand toward your right or from west to east. Suppose this orange or ball would keep on turning this way forever without stopping, then it would be like the earth. The needle or rod we can call the axis. Now the earth turns like this orange or ball and never stops, and we say it rotates or turns on its axis. There is no rod of iron or anything through the earth for it to turn on, but it turns just as though there was. Now take a lamp or candle, and put one side of the ball toward the lamp. How much of the ball is in the light?

One half. How much is in the dark? *The other half.*

Now turn the ball as you did before from west to east and what do you notice? The part that was light is getting dark, and what was dark is getting light. Keep on turning it and the parts will keep on going into the light and then into the dark. Now we say the candle represents the sun and the ball represents the earth, we see the same changes are taking place continually on the earth. Whichever part is bright has day, and whichever part is dark has night. So we see now why it is sometimes dark and sometimes light.

Because the earth keeps on turning some part of its surface into sunlight, it is always day in some place, *light side of the ball*, and always dark in the place just opposite, *dark side of the ball*. It takes you only a second to turn

the ball once, but it takes the earth twenty-four hours to turn on its axis.

When we are eating our dinner here, 12 o'clock noon, the children in China who are right opposite to us are fast asleep in bed, 12 o'clock night. When we are eating our breakfast, the children on the other side are eating their supper.

When a place on the earth (*pointing to ball*) first comes into the light we call it morning there; but instead of standing still, it goes right on, and hence it gets later in the day at this place and another place comes into the sunlight or has its morning and so on. By this we see it is always morning somewhere on the globe. This is why we say *Holy Mass* is always being celebrated somewhere in the world. It is morning in *Oceanica*, then in *Asia*, then in *Europe*, then in *America* and so on again in *Oceanica*.

While holding the ball be careful to have it slant at an angle of $23\frac{1}{2}$ degrees, because the earth always slants this way.

Refer to how thankful we should be to God for having given us day and night in succession ever since the creation of the world. Never once did the earth stop turning or the sun cease to shine.

Besides turning round and round on its axis in this way, the earth is always moving or revolving around the sun. (Draw a large elliptical ring on the floor with chalk. About the middle of the ring place a lighted lamp on a table. Take the globe in your hand, and walk around the ring on the chalk line, keeping the globe in the light of the lamp, and turning it constantly on its axis. If you have no means of using a ball and a light to illustrate the moving of the earth around the sun, have a boy or girl stand in

the centre of the front of the room, and a child turn on its heels in a ring around this central one.)

Explain that the lamp is to show the sun; the globe, the earth; the ring, the path the earth takes around the sun.

Tell them it takes the earth a year, $365\frac{1}{4}$ days, to make this journey.

Ask questions to drill on these two movements, the one on its axis, the other around the sun.

DIFFERENT MOVEMENTS

1. How many different ways does the earth move?
It moves two different ways, once around on its axis in twenty-four hours, and once around the sun in $365\frac{1}{4}$ days, or a year.
2. What does the turning around on its axis cause or bring?
It brings light and darkness.
3. What do we call the light and darkness?
Light is called day and darkness is called night.
4. How does this turning around bring day and night?
When the sun shines on our part of the earth, we say it is daylight; and when our part of the earth is turned away from the sun, we have no sunshine and we say it is night.
5. Are day and night always the one length of time?
No, in summer we have longer days than in winter..
6. How many times the size of the earth is the sun?
The sun is more than a million times as large as the earth.
7. Why does the sun appear so small?
Because the sun is about 92,000,000 miles away from the earth.

8. When we are having day what are the people on the other side of the earth having?

They are having night.

9. Tell us some people that have midnight when you are eating your dinner.

The Chinese are having midnight then.

And when you are coming to school in the morning, then they are going to bed, for they always have twelve hours later.

10. Does the sun move?

The sun moves around on its own axis.

11. Is it warmer in the daytime or at night?

It is warmer in the daytime.

12. Why is this?

Because the sun gives light and heat.

Divisions of Land

PREPARATION:—Moulding board, sand, blackboard, map. As each new name is given write it on the blackboard.

METHOD:—Today we are going to learn about the different divisions of land.

Of what did we say the surface of the earth is composed?

Mary: *It is composed of land and water.*

ISLANDS

As I said we shall speak about the land. Here is sand that I wish you to think of as land; and this blue moulding board as water. Watch what I am making.

Mould an island. Pointing to the land, ask—What does this represent? *It represents land.*

And this? pointing to the board. *It represents water.*

Which did I form, a small body of land or water?

You formed a small body of land.

Where is the water? *It is all around the land.*

Well then we say, this is a body of land surrounded by water.

What word tells me the water is around the land?

Surrounded.

Is the land only partly surrounded by water?

No, it is all surrounded.

Then we say it is all surrounded.

Who has seen a body of land entirely surrounded by water?

What did people call such a place?

They called it an island.

What, then, is an island?

An island is a body of land entirely surrounded by water.

You can see islands in the Schuylkill River, in the Delaware.

Sometimes in the creeks and brooks in the country you find these tiny islands.

Mary, come draw on the board the island I have made.

Send several children to draw it.

Now draw down the wall map and have the children point to islands on the map.

They must be told the blue represents water and the other colored part means land.

It is well in this case to have them give the name of the island; as Newfoundland, Iceland, Cuba, etc.

Call different children to the board to mold islands; then ask:—

What do we call a body of land entirely surrounded by water?

We call it an island.

Why is it called an island?

Because it is land entirely surrounded by water.

On your slate draw two islands, differing in shape. Those are correct. Bertha, come to the map and show me an island.

Here are pictures of different bodies of land; Mary, point to an island.

Did Mary point to an island, Clara?

No, Sister. Why not?

It was not entirely surrounded by water.

What must you remember then about an island, Charles?

That it is land *entirely* surrounded by water.

Write on the blackboard the definition of an island.

CONTINENT

Draw the pupils' attention to the continent of North and South America. Let them see that it is entirely surrounded by water, hence an island. Then tell them that because it is so *large* an island, it is given another name. It is called a *continent*.

Why do we call it a continent, Mildred?

Because it is a big island.

What is the difference between a continent and an island, Mildred?

A continent is larger than an island.

Samuel, show me a continent on the map. *Map of Eastern Hemisphere.* Another, James.

Yes, this is Australia. Formerly it was called an island, now it is called a continent.

Have all islands the same shape? *No, they are different.*

Point to a group of islands on the map. If you wish you can give the name Archipelago. Let the children point to other groups of islands. Clara, draw an island on the board. Laura, draw a continent.

PENINSULA

Now mold a peninsula, one side no water, let it touch ridge of board.

Agnes, is this an island? Why not?

It is not entirely surrounded by water.

Then you can say it is *almost* an island.

Does anyone know what it is called? It has a name that means almost an island, *pen-insula*.

Draw the outline of this peninsula, Mary.

James, come mold another peninsula.

Willie, point to a peninsula on the map. Give its name.

Call on different children to mold, draw, point out, as before.

What do we call these bodies of land? Why?

What then is a peninsula?

What is the difference between a peninsula and an island?

What is the difference between a continent and an island?

Grand Divisions

Just as large islands are called continents, some of our large peninsulas have another name; *point to the different grand divisions and let children see that they are peninsulas, we call them grand divisions.*

What do you think a grand division is?

It means a big part.

Yes, these are the large parts or divisions of what?

Of continents.

Have children point to the different grand divisions on the map and name them.

What do North and South America together form, Mary?

They form an island.

Who can tell me what else?

They form a continent. Why?

ISTHMUS

By what are these two grand divisions connected?
Point to the isthmus.

By a narrow strip of land. Mold two bodies thus connected.

Suppose I make an opening on this strip of land, what happens?

The water runs through.

Would I still have two peninsulas?

They would be islands now.

Then what was it helped to keep these two grand divisions peninsulas?

The strip of land that connected them.

Now this strip of land has a name. It is called an *isthmus*.

What is an isthmus, John?

An isthmus is a strip of land.

What does it do?

It connects two large bodies of land.

Tell what an isthmus is and does?

An isthmus is a narrow strip of land connecting two larger bodies of land.

Call children to mold isthmuses and then to draw the same on the board with colored chalk. Let others point them out on the map.

REMARK:—The Panama Canal now separates North and South America.

CAPE

Look at the outline or edge of these peninsulas. Are they even all around, or alike in all places?

No, in some places the water goes into the land.

What do you notice about the land in some places?

It comes out into the water.

Show me places where the land goes out into the water.

Now to such land we give a special name. We call such a point a *cape*.

What is a cape, Mary?

A cape is land going out into the water.

Yes, a *cape* is a point of land extending into the water.

What is a cape, Charles? Anna?

Draw on the board with colored chalk what I have molded. Mark the name *cape* in the cape.

Point to a cape on the wall map. To what cape did you point?

Call different children to mold, draw and point out capes.

Review

Ask for all land divisions taught so far and their definitions.

Open geographies, if they have them, and read definitions there given, have some studied for the next day.

Write on the board island, continents, peninsula, grand division, isthmus, cape. For busy work have the pupils write the definitions, or draw the same putting the name in each.

MOUNTAIN

Mold a mountain.

Who can tell me what I have molded?

Is it a real mountain?

Could I put a real mountain on the board? Why not?

Who has ever seen a mountain? Well, Joseph, tell us about it. Now you all heard what Joseph said. He started at the bottom of the mountain and went up the side to the top. When he looked down everything below looked very small. Why?

Because he was so far away.

Was it warm at the top of the mountain?

No, it was cold, though below it was warm.

Children, as we go from the base to the top of a mountain, we find the air getting colder and colder. The tops of some high mountains are covered with snow all the time. *Show picture.*

Do the mountains run up into a real point as we see here on the molding board?

No, they are smaller at the top than at the bottom, but all are not in a peak. You can stand on the top of the mountains, there are even a few houses there.

There are some mountains along whose sides you would find vineyards, meadows, farms, and houses. Cattle and sheep graze along their sides. Sometimes the cattle are left on the mountain side all night. These cattle give very good milk. Sick people often go to the mountains to live.

Show how mountains are represented on the board and

on the map. Let them point to different mountains and name them. Show pictures. Draw out the definition. Read it in the Geography.

HILL

Mold same.

Now I have made something that is not so high as a mountain, yet something like it. You often see such near home. You like coasting on them in winter. What do you call them?

We call them hills.

What is a hill?

VOLCANO

We said that all mountains are not alike, now we shall make an opening in our mountain (either on the top or side). Some mountains have openings like this, and sometimes smoke, ashes, melted stones rush out of these holes. *Draw pictures on board. Show picture.* Who knows what we call such a mountain?

We call it a volcano.

Yes, we call it a burning mountain or volcano.

The smoke and lava, as the melted matter is called, do not always come out at the top. They come out wherever the mountain is weakest.

Where does this burning matter come from?

From the inside of the earth.

What then must the inside or interior of the earth be like?

Yes, now you know when the kettle is boiling, if you hold something over the nozzle of the kettle, the lid will pop up and down, for the steam must make its way out. If you closed the spout and made the lid tight, then the steam

would force its way out where the kettle was getting thin or weak. This is just what the steam formed in the inside of the earth does. See the earth keeps it in, then it tries to find a way out. Here in the mountain it finds a weak place, then it forces its way out and pushes before it all that is in its way. This is why stones and dust come out, too. This opening we call a *crater*.

What is a crater, Lena?

It is the opening in a volcano.

Review definitions and refer to same in geographies.

PLAIN

Mold a plain, put trees on it, rivers in it.

Sometimes for miles and miles, the earth is all flat, not even a mountain or a hill is to be seen. Such places have a name. Who knows it? No one?

They are called *plains*.

What is a plain, Mary?

A plain is a level tract of land.

Again, Jennie.

Anna, come mold a plain on this board.

What is this, Katie?

DESERT

Now I shall put some stones on Mary's plain, and take away the water and trees. Will anything grow on such land? Why not?

Because the ground is too stony. It has no water.

Does anyone know what such a plain is called? You read about it in the story of Moses in the Bible History.

I think it is a desert.

Yes, do you remember the name of the animal that can travel across the desert? It has a hump.

It is the camel.

Why can it travel across the desert?

Because it can do without water. Because its feet suit the sand.

Do you remember how the Israelites in the desert suffered for want of water? Tell me about it, James.

Repeat the story of the Jews in the desert.

What is a desert, Mary?

It is a stony plain.

A desert is a barren plain.

John, what is a desert?

Have definition repeated, then read from geographies.

OASIS

Tell the children about the fertile places in the desert. On your molding board make one, putting water and trees and grass there. Draw attention to God's goodness in letting us have oases. Ask for definition. Draw out that it is a fertile spot in the desert. (Refer to palm trees of Elim in desert as mentioned in Bible history.)

Review all definitions taught. Write names on board and let children write definition. Another day, for Busy Work, write definition on board, leaving *name* blank; let pupils copy, supplying name.

Water Divisions

What have I here on the molding-board?

Yes, an island. Who can tell me better? What kind of an island?

A large island, and what name did we give to a large island?

That's it, it is a continent. You told me a continent is a large body of land entirely surrounded by water. Look here on the molding board and tell me whether the body of water around the continent is larger or smaller than the continent.

Very well, it is much larger, and just as we have large bodies of land, we have large bodies of water; and the water around the continents forms one big body and is three times as much as the land.

Look at this figure here on the blackboard and you will understand what I mean. If this would represent the earth, three parts of it would be water and only one part land. *Three-quarters of the whole is water, one-quarter of the whole is land.*

Now, John, come here and form a large body of water. Mary, try to draw it on the blackboard.

Very good; Ellen, come here to the map and show me the one big body of water I spoke of before. That's right. But this large body of water is again divided into five parts, and every one of these five parts forms still a large body of water. If you look at this map, you can see them very plainly. Come, Emma, and point to them. That is correct.

Any one of these large bodies of water is called an ocean. What, then, is an ocean, Mary?

DEFINITION:—An ocean is a very large body of water.

But besides the grand division we have other bodies of land, so, too, we have other bodies of water.

To what am I pointing now on this map?

To a body of water.

But is it quite so large as the oceans of which we spoke before?

No, it is not.

Is there a difference in water?

Very good, some is fresh; namely, the water we drink; but some water is salty. Ocean water is always salty, and on account of this, we cannot drink it. Now, when we have bodies of water that are smaller than the ocean, but have ocean water, we call them *seas*.

What then is a sea? *Definition.*

Come, John, point to a sea on this map; to another one.

Now what is the difference between an ocean and a sea?

A sea is smaller than an ocean.

Now let us come back to our molding-board and look carefully at this grand division with the ocean around it. Do you notice something? What did you tell me a peninsula was? Very well, a part of land *not* entirely surrounded by water. Do you not see the opposite now, a body of water not altogether surrounded by land?

I now draw on the blackboard the same form as is on the molding-board.

Ellen, come point to the body of water I spoke of just now. Charles, show it to me on the molding-board. Elsie, draw the same on the blackboard. Tell me again what you have done. Yes, you formed on the blackboard a body of water almost surrounded by land. Ellen, point to such bodies on the map, and tell me what you are showing. That is it, and such bodies we call *bays or gulfs*.

Why is it called a bay or gulf? Very good, because it is almost surrounded by land and yet it is an arm of the ocean.

And with what could you compare the bay or gulf, if you think of your land divisions? Very good, to the peninsula, because, as the peninsula is a body of land almost

surrounded by water, so is the bay or gulf a body of water almost surrounded by land.

Charles, point to an isthmus and tell me what it is.

Very well, the isthmus is a narrow neck of land connecting two large bodies of land. Look at the large bodies of water now, and tell me whether you find two bodies of water connected by a narrow neck of water.

Well, Charles, point to it. That is good. Point to another one. Who can show me this on the molding-board? Elsie may form it on the molding-board, and Emma may draw it on the blackboard. What are Emma and Elsie doing, Mary?

Yes, they are forming two large bodies of water connected by a small neck of water, and such a neck of water is called a *strait*.

What is a strait, John? . (Definition.)

What one of the land divisions reminds you of a strait?
Isthmus.

Now, children, look here and tell me what I did with the grand divisions that I had on the molding-board and on the blackboard. I made a hole on a certain place and what should it represent?

Yes, it represents a body of water in the land. The first row will show this to me on the blackboard, and the next row will come to the molding-board and mold it. Have you had something like this in your land divisions? Yes, the island. You see that you now have the opposite of an island. And such bodies of water as we have here are called *lakes*.

What then is a lake, Charles?

Right, a lake is a body of water surrounded by land.

Now look again and tell me what I did. Yes, I formed a long string of water; but now tell me more about it. Is it as wide at the beginning as at the end, John?

At the beginning it is very tiny, but it gets wider and wider. And where does it end, Mary?

Very well, it ends in the ocean.

This string represents to you a body of water that is quite different from the other bodies of water. If you listen I will tell you the story about its beginning. But you must tell me first what becomes of the rain-drops when it rains?

Very well, they go partly into the earth. *Using the chalk.*

You all know by this time what a mountain is. Now see, when the rain falls on the earth, it will not stay there, for it is not idle and likes to be busy; so it works itself through some place and comes out as a tiny little stream. Some day it might rain again and the water on the streets would again run into that little stream of water. Then again it meets companions like itself and you see that it always gets larger and larger, and it keeps on flowing till it comes at last to a large body of water that we call an ocean.

Now, Mary, come to the blackboard and show us what I showed you just now. That was very good; but now let us hear what we call such bodies of water; first, when it is very tiny we say it is a *brook*, but as soon as it grows large we call it a *river*. Now, John, tell me what a brook is, and a river; and Charles may come to the molding-board and make it the way John tells you.

You have now learned the different bodies of water and I wish to know how much you remember and how neatly you can draw them on your slates.

Now take your slates out and draw all the land divisions with their names, and write the name of the opposite body of water.

IV. PLACE AND DIRECTION

Children, with which hand do you make the Sign of the Cross?

That is right, we make the Sign of the Cross with our right hand. Hold up your right hand. Hold up your other hand. Who knows what you call it? *We call it the left hand.*

Now all point to the right. I see some pointing to the left. Once again; all point to the right. All on the right hand side of the room face toward the left, and all on the left hand side face to the right.

Who sits to the right of you, Harry? Who sits in front of you?

Who sits in back of James? Very good. Now face the back of the room and point to the left. To the right, etc.

Suppose you want to tell us where a place is, it would not do to say simply it is to your right or left, in front or back of you.

If I ask you which is the way to your home, who knows what I mean? Yes, you all know the way home, but if I were to tell you to go to a place where you had never been before, you would naturally ask, "Which way is it?" The way to a place is called *direction*. Now we have names for direction. What are they? Who can tell me? That is right, *north, south, east, and west*. Now what is opposite to *north*? To *east*?

We can tell the points of direction by seeing where the sun is. Have you ever seen the sun rise, Charles? Point

to the place where you have seen it. Does anyone know what you call that direction? *We call it east.* Tell where the sun rises. William, tell us where the sun sets. *Papa says it sets in the west.* Very good, did you ever see it set? Point in the direction in which you saw it. Now what do you call the place where the sun sets, Charles? Where does it rise? When does it rise? When does it set?

If you face the east, where is the west? Face the back of the room, and point to the east. Very well, then you would point with your left hand. If you face the sun coming to school in the morning what direction are you going? Yes, you are going east. If you were to come to school in the evening where would the sun be? Very good, it would be behind you; and in what direction? That is right, it would be in the west because it sets in the evening.

Now if you stand with your right hand pointing toward the *east* and your left hand toward the *west*, you would be facing the *north* and the *south* will be behind you. Now face the east and point toward the north. That is right, the left hand points to the north. Now point to the south.

Who sits north of you, Charles? What direction is the door? the window? the teacher's desk? Which way do the pupils face? Which way am I facing? In what direction is the church from here? From your home? In what direction in your home from here, James? In what direction is the playground from the school? What street is north of the school? south? east? west?

Now, suppose you want to travel at night when you cannot see the sun, how can you tell what direction to go? Well, George, you seem to know; can you tell us? No, not by the moon; but do you not see something else in the sky at night besides the moon? Exactly; now did you ever notice several bright stars in the northern part of the sky?

All of you look again tonight. These seven stars are called the *Great Bear*, because at first men thought they looked like a bear with a long tail. We call this figure the *Dipper*, because it looks to us like a *dipper* with a long handle. *See, it looks thus.* (Draw.)

Find the two bright stars furthest from its handle. A line drawn through them will point to another star not quite so bright, called the *North Star*. This star is always in the *north*; so on clear nights you can always tell direction by it. Now, James, if your back is turned to this star, what direction are you going?

That is right, you are going south.

Now suppose the weather is cloudy, and you can see neither sun nor stars, how can you tell direction then? Well, we often say that God helps those who help themselves, and since God has given us the sun and stars to tell us the direction, man has made something to help himself with in case these bodies do not shine. Who knows what this is called? It is called a compass.

Sister, my papa has a little thing he calls a compass; he takes it with him when he crosses the water.

Yes, George, I thought your father had one; he is a sailor; so do all sailors have them. Columbus would never have reached America had he not had a compass. Now, did you ever see it, George? What did it look like? Yes, it is a small box or case holding a needle which swings on a pin and always points toward the north; then it is easy to tell the other directions.

Now, we see that north, east, south, and west are the chief directions. But a place might be between the north and east, and it would not be fair to call it north only, or east only, so we join the two and say *northeast*. Now, if a place is between the east and south, what would you call

it? *Southeast*. Between the south and west? *Southwest*. And between the north and west? *Northwest*. *Point to compass, also to drawing*.

If I go out of doors, how can I find the north? How on a starlight night? On rainy days? If you were lost and knew your home was south, how would you find it, if it were morning?

That is correct, you would stand with your right hand toward the sun, and you would know that the south was behind you. The Indians found their way in the woods by the amount of moss on the north side of the tree. Why was there more moss on the north side? That is right, because the north side is colder. Which way do little birds go in winter?

Yes, they go south. Where is the sun at noon? Yes, it is over your head at 12 o'clock.

You all know what a picture is. But do you know what a plan is? If you were some miles away and wanted to show some other children the school to which you go, the shape and size of the building, and how the rooms are arranged, how could you do this? Here is the picture of a schoolroom. (*Showing picture*). Here we see desks, the teacher's desk, and what else do you see? *We see a chair, a clock, a globe, and the maps in the picture*. The picture appears as though we stood at the door and looked in. Now notice our schoolroom. What do you see? *We see the same things*.

I will draw a plan on the blackboard so that you may see the difference between a picture and a plan. A picture shows the objects, the plan shows the place where the objects are and their direction from one another. We will first measure the sides of this room. We will suppose the two long sides to be 40 feet, and the short sides to be

30 feet long. We will make straight lines for the sides of the room. Of course, we will have to make it smaller than the room because the blackboard is not long enough. We will make 1 in. in this plan stand for 1 ft. in the room. If the room is 40 ft. long, and we call 1 in. a foot, how long shall we make our drawing? We shall make it 40 in. And as the short sides are each 30 ft., how many inches shall I make it? Yes, we shall call it 30 in. Now we shall draw the places for the door and the windows, and the oblongs for the desks. But we must remember that 1 ft. is to be counted an inch, therefore if the door is 3 ft. we will make it what? 3 in.

The same with the desks. And now, we shall draw a circle for the globe and an oblong and a chair for the teacher's table and chair, and show just where they belong. Now we have a plan of the schoolroom. We shall put N. to show the north side, S. to show the south side, E. to show the east side, W. to show the west side. We can now tell the direction of one thing from another in our plan. Now you draw the same on your papers letting every inch represent ten feet, as your papers are smaller than the board. Your plan will be smaller than mine, still everything will be in its place. Now draw a plan of the school house and school yard. You will have to measure not only the house, but also the length and width of the yard. The plan must show the size, shape, and place of everything on the grounds. While you do this face the north, so that the top of your plan will be the north side of the grounds.

What is the name of the street on which your school is built? Between which streets? What direction does it face? In what direction is the school from your home? How far? etc. Draw a plan of your parlor, bedroom or kitchen, etc.

As we have learned, drawings that show rooms, buildings, or streets are called *plans*. But drawings that represent land and water are called *maps*. A map shows where countries, rivers, mountains, and cities are; and how far they are from each other.

Here is a map showing mountains and rivers. The short lines facing each other represent mountains, and the lines drawn very close together making the map look dark represent the high part of the mountain. The winding lines represent the rivers, and as you see that they get thicker towards the end so do the rivers get broader towards the sea. But now when you look at the lines you must not think of them as rivers and mountains, but you must think of the real rivers and mountains which they represent.

Review

1. Where do we say the sun rises?
2. Point towards the east with your right hand.
3. Now point towards the west with your left hand.
4. Tell me something that is on the east of the school-room.
5. Something on the west side.
6. Something on the north side.
7. Something on the south side.
8. Now tell me a building north of the school building.
9. A building east of the school building.
10. A street south of the school building.
11. A house west of the school building.
12. In what direction from your school building is the church?

13. Suppose you were in a train in the afternoon and the sun were on your left side, in what direction would the train be going?

The train would be going north.

14. How do sailors find the directions at sea?

They know it by the Mariner's Compass in which there is a needle or bar of which one end points nearly north, and the other end points nearly south.

15. What do we call these directions? *We call them cardinal points.*

16. What should we call the direction between east and north, let us say, that corner of the school room?

17. What should we call a place between south and east?

18. What should we call a place between west and south?

19. What should we call the direction between north and west?

20. Now place this chair on the north side of the school-room.

21. Place the waste basket on the west side of the school-room.

22. Show me north on the map, east, west, south.

23. Point to an island east.

24. Point to an island north of North America.

25. Point to a cape on the west side of North America.

26. Point to a country south of North America.

27. Point to an ocean east of North America.

28. When Columbus sailed over to this country, in what direction did he sail? *He sailed in a westerly direction.*

29. In what direction would you have to travel, to reach the Pacific Ocean? *We would travel in a westerly direction.*

V. THE GLOBE, REPRESENTING THE EARTH

EQUATOR AND POLES

Holding Globe. What do you think we are going to call this globe for the time being? That is right, we shall call it the earth. Now, do you think it is all round? Yes. Well, I do not, see here at the top and bottom it is flattened out just a little. Can anyone tell me what we call the top? *The north pole.* That is right, John. Why do you suppose we call it the north pole? If we went up there, would we really see a pole sticking up like this one? No, it is only an imaginary pole or line passing through the earth. If we go to the other side, what do we call that place? *The south pole.*

Now, children, you see a line running all the way around on this globe. Can you tell me what it is called? *The equator.* What do you notice about the distance from the equator to each of the poles? *It is exactly the same.*

Now tell me what the equator is. *The equator is a line passing around the earth.*

Now Charles, would you see a line if we were to visit the countries through which the equator passes?

We would not.

John, tell us what the equator is.

The equator is an imaginary line passing around the earth.

Draw a line from northeast to southwest. This is an imaginary line passing around the earth. Mary, can you tell us what we want?

The equator is an imaginary line passing around the earth, at an equal distance from each pole.

Yes, that will do. *Holding globe.* What else could we call this? *A ball.* What else? (No answer.) I will tell you, it is called a sphere. We will use this apple now, and imagine it is our globe. What are we going to call it? *A sphere.* The earth is called a spheroid because it is not quite a sphere. A sphere is perfectly round.

If I cut it into halves, what shall we call each half?

A half of an apple.

No, I mean calling it a sphere.

A half of a sphere.

Yes, but in geography we call it a hemisphere, which means a half sphere. I will put it together now and draw the outline of North America, South America, etc., on the outside of the apple. Taking a sharp knife cut through this outline until you reach the flat cut surface of the apple. The outline will be seen on this flat surface. This flat surface with the outline will represent the hemisphere map as we see it. All hemisphere maps are shown as circles with the bodies of land and water in each. Show that there are two, the Eastern and the Western.

THE CONTINENTS

Who knows how many continents there are?

Elizabeth: *There are two, Eastern and Western.*

Yes, but do you see this large island down here? *Australia.* It is so large, it is also called a continent. *Show on map.* What do you mean by a continent? *It is one of the large divisions of the earth.* In this map of the Western Continent, what principal countries do you see? *North America and South America.* On the map of the Eastern Continent? *Europe, Asia, and Africa.* And the other continent, with all its small islands lying around it is called Oceania. These are called grand divisions of the

earth. You see we divided them into smaller divisions this time. Now name the grand divisions as I point to them.

THE OCEANS

We have finished separating our land, now we shall see what they call all this water that surrounds it. A long time ago it was known as one large ocean, and now each has a name. Clara, you may come here and tell me the name as I point to it. *Arctic Ocean. Antarctic.*—This ocean is so called because it is opposite to the Arctic.

Atlantic.—Long years ago, the people of Europe thought a god lived in the Atlas Mountains. He was called the god Atlas, and was supposed to hold the earth on his shoulders. They thought the water that washed the shore of Africa reached to the end of the earth. They never dreamt of the land on the other side, and never thought how large the earth really is. This water was called Atlantic Ocean, from their god Atlas, and still bears the name today.

Pacific.—It was so called, because the day it was first visited its waters were so calm and peaceful. It is, however, no more peaceful than the Atlantic.

Indian.—This ocean is named from India, a country lying north of it.

Charles, name them as I point to them.

Mary, in what direction is the Atlantic Ocean from North America?

East.

What ocean is west of Europe?

Atlantic Ocean.

Continue with many questions, asking the direction of one grand division from the other, of an ocean from a grand division, and so on, until well known.

Who can point out our own city on this map?

John, you may try. Paul, tell him in which hemisphere to look.

Now tell me where Philadelphia is. It is in the eastern part of the Western Hemisphere, and also in the eastern part of North America.

VI. CLIMATE AT DIFFERENT PARTS OF THE EARTH

THE SEASONS

Children, have you noticed any change in the appearance of the trees and the grass these few days past?

Oh yes! the little buds are on the trees.

Our trees have little leaves on.

The grass is getting green.

And I saw many little flowers peeping out among the green leaves.

I am glad you noticed all these things. Now, can anyone tell me what time of the year we call this? Yes, that is right. This is spring. Is it very warm now or very cold?

No, it is not so warm, nor very cold.

Do you know any other time of the year when it is not very warm, and not very cold? Yes, it is autumn.

Very good, but we do not always have spring and autumn; some days the weather is very warm. It is so warm we have to close the schools. *Then it is summer.*

And when all the trees are bare and the wind blows, it gets very cold. *Then it is winter.*

Does anyone know what the different times of the year are called?

Yes, that is right; they are called the seasons of the year.

How many are there? *There are four.*

Are they all alike?

No, two are mild or temperate.

One is warm; and one is cold.

Now let us name them as they follow in order.

The seasons of the year are,—spring, summer, autumn, and winter.

Which are the two mild seasons?

Spring and autumn.

And the other two?

Summer is warm.

Winter is cold.

Very good.

CLIMATIC REGIONS

Showing a globe. Does anyone know what this object is?

Very good, it is a globe.

What does it represent? *It represents the earth.*

Now watch as I pass my finger around a certain part of the globe, and I will tell you what line it is touching. It is the equator.

Is there really a line around the earth as we see on the globe?

No, it is only an imaginary line.

The earth has other imaginary lines on it besides the equator. Watch and I will show them to you. Here is one

above the equator and here is one below. Where are the poles?

At the top and bottom of the globe.

Right. Now notice and I will show you an imaginary line a little below the North Pole and one a little above the South Pole.

Now you have seen the other imaginary lines on the globe.

Did you ever hear anyone speaking about the North Pole?

Yes, Sister, I heard Father say that men have tried to get to the North Pole, but it was so cold, they had to turn back before they found it.

That is right. It is very cold near the North Pole. And also, in all this part from the North Pole to the first line below the Pole it is very cold.

Let us go to the South Pole.

Do you think it is hot or cold?

I think it is hot. I think it is cold.

Well, since you don't seem to agree, I shall tell you. At the South Pole it is cold, as well as at the North Pole. On this part of the earth lying between the South Pole and the first line above it, the weather is very cold.

We have the climate from the North Pole to the first line, and from the South Pole to the first line.

Now since we have found the climate of the North and South to be alike, we shall continue taking the both parts together.

As we near the lines, *the teacher pointing*, we find it gradually becoming warmer, and when we pass these lines we are in a section where the climate is different.

Let us pass slowly over this part of the earth's surface to the next line; we shall do the same from the lower part

of the globe, and as we come nearer to the second line the climate is still warmer.

Do you think we notice this change at once?

No, only gradually, or little by little, as we travel along we notice the difference.

Now we have only one section left; we shall go, *still showing map or globe*, towards the equator, and as we advance, we must admit we feel it getting warmer and warmer. When we reach the equator, we feel the heat very, very much.

Now before we leave this part of the globe let us look about and see whether the plants and animals are familiar to us.

On this part of the globe, we would see the elephant, giraffe, rhinoceros, lion, tiger, camel, zebra, ostrich, monkey, crocodile, jaguar, leopard, large snakes, and many other wild and ferocious animals; also many large insects and beautiful birds.

Are these animals large or small? *They are very large.*

Anna, what do you notice about the trees here?

They are all very tall, and the leaves are very large.

What are the fruit trees of this region?

They are the cocoanut, date, fig, banana, orange, and lemon.

Do any other plants grow here?

What did you drink for breakfast this morning?

We had coffee.

And what did you put in it?

I put sugar in mine.

Yes, then what two plants grow here besides those we mentioned?

Coffee and sugar-cane.

Let us learn something of the animals and plants that live and grow in these two parts of the globe. (The Temperate Zones.)

What animals do you see every day?

Cat, dog, horse, cows, sheep, goat, swine, barn-yard fowl, such as chickens, ducks, etc.

Are there any wild animals in this part of the globe?

Yes, the fox, beaver, wolf, wild-cat, panther, deer and bear. There are many kinds of birds, some snakes and other reptiles.

Now we said that the climate of this belt *showing on the globe* and the climate of the one opposite were the same; then what do you think about the animals and plants of these two regions?

Mary, what do you think of them?

I think they would be alike, too.

So they are with one exception; in the southern regions, the kangaroo is found, but not in the north.

Now, Jane, what can you tell me of the plant life here in the Temperate climate?

Here we find all grains, corn, barley, oats, rye, wheat, and rice.

Are there any trees here, Sarah?

Yes, the most important are oak, maple, poplar, pine, chestnut, and walnut.

Anna, have we any fruit trees here?

Yes, there are many fruit trees; such as apple, pear, peach, cherry. Also many kinds of vegetables. Cotton and flax are also raised here.

Now we must learn something of the animals and plants of the cold regions.

Agnes, why do we bring the flowers and plants into the house for the winter?

Because it is too cold for them to grow outside.

Very good, we said yesterday that it is very cold in these parts of the globe, therefore very few plants grow here.

We find only mosses and lichens growing here; the trees are scarce and are very small.

The animals, too, are peculiar to the climate; here we find the reindeer, Eskimo dog, polar bear, seal, walrus, whale, eider-duck, and water birds.

The plants and animals of the two cold regions are the same.

Draw maps of the hemispheres. Divide the vertical diameter into halves. Divide each half into fourths. Draw the Arctic Circle a little below the first division of the upper half, the Tropic of Cancer a little above the third division, the Tropic of Capricorn a little below the first division of the lower half, the Antarctic Circle a little above the third division of the lower half.

Write the name in each zone. Color the cold zones *blue*, the temperate zones *yellow*, and the hot zone *red*.

Write in each zone the names of the animals and plants found there.

A good method is to paste small pictures of the animals and plants on each zone, and keep this chart for drill. Require each child to make a map as described above.

Review

1. Would we find the weather all the same on the outside of the earth?

No, some of it would be very cold or very hot, and in other parts the weather would be mild.

2. Why would we find different weather on the outside of the earth?

Because the sun shines straight on the earth in some places and slant in other places.

3. How does the sun shine on the places where it is very hot?

It shines straight on the places that are very hot about the middle of the earth.

4. How do the other parts of the earth get the sunshine?
The other parts get it slant.

5. What kind of plants and animals do we have in places where the sun shines straight?

We have very large and heavy plants, and wild animals in these places.

6. Name some plants and animals.

7. What kind of plants and animals do we find in places where the sun shines slant?

We find smaller plants and tame animals.

8. Name some plants and animals found in very hot places, and some where the sun shines slant.

9. Are there any places where people do not see the sun part of the year?

Yes, near the northern and southern end of the earth there is no sunshine part of the year.

10. How is the weather or climate in these parts of the earth?

It is very cold in these parts.

11. Where else do we find animals beside on land?

We also find animals in the sea.

12. Name some of these.

The shad, herring, mackerel, cod, eel, halibut, and others.

13. Of what use are these animals?
They are good for food.
14. How do the fish differ from other animals?
They are covered with scales.
15. Do you still remember what we said about home animals? What animals are they?
Yes, they are those that live with us, and are called domestic animals.
16. They are always found in what climate?
They are found in mild regions.
17. Name some of them.
18. Now tell me some animals that live in the frigid, or freezing regions.
The polar bear, seal and whale are found in the frigid, or frozen parts of the earth.
19. What kind of animals are found in the hot regions?
They are very wild and strong.
20. What animals are found in the torrid, or burning regions?
In the torrid, or burning regions, we find the tiger, elephant, camel, monkey, lion, etc.
21. What difference do we find in the animals of the freezing climate?
The animals of the freezing climate have thicker skins and furs than others.
22. Why is this?
Because they need protection from the cold.
23. Besides animals, what else do we find in different climates or regions?
We find plants in different climates.
24. Are the plants the same in all climates?
No, there are different plants in every climate.

25. Where do we find the most plants and trees?
We find them in the torrid, or burning regions.
26. Mention some plants and trees of torrid regions.
The palm, fig, coffee, tea, sugar, orange, lemon, banana, and gum plants or trees.
27. What plants do we find in our parts of the country?
We find the potato, cabbage, turnip, carrot, chestnut, walnut, peanut, oak, apple, peach, pear, and many others.
28. Where do we find the least plants?
We find them in the frigid, or freezing regions.
29. Why is it so?
Because it is so very cold, the ground is deeply frozen, sometimes to four and five feet.
30. Name some plants of this region.
In this region we find mosses, lichens, and very low and stunted grass.

VII. NORTH AMERICA, TAUGHT FROM THE MAP

In what country do we live?

We live in the United States.

Yes, that is right, but to what large tract of land does the United States belong?

What name did we give to it the other day when we looked at our hemisphere maps? *We said it was North America.* We wish to find what the country in which we live, is like. We must learn it from the map.

If there is no map in the classroom, make one before teaching this lesson.

GENERAL OUTLINE:—Who can come to the map and run his fingers along the edges of North America?

What form did Mary's fingers make?

Has no one seen it?

Now watch again.

That is right. A triangle. Draw a triangle on the board.

Is that the way North America looks on the map? What is the difference?

That we call an irregular coast line.

What part of North America is the most irregular?

Is the irregular coast line of any use to us?

Why do you think it is?

Well, you see, the ship coming on the ocean from other countries could not come in so easily if it were not so irregular. Then we could not get so many things.

Mary, what shape has North America?

What else did we say about it?

Tell me something you see while you are looking at it, Mary.

Yes, but I see something else; I see that there is water above and on each side of it.

Tell me another way to say this, Anna.

I see water on the north of it, on the east and on the west of it.

Tell me that this forms the boundary.

Do you see water to the south of it?

Yes, you see some, but come out and see whether you see something else at the south of it.

You see a narrow strip of land, do you not?

What would you call it? Does any one remember? What does an isthmus do?

What might we call North America, then, since it is nearly, but not entirely surrounded by water?

A peninsula.

Require the pupils to draw the outline of North America on board and paper.

John, can you see a peninsula on the map? Another?

Then teach those given in the Course Book. Drill thoroughly so the child may recognize them at once.

Then teach in the same manner the Capes, Islands, Mountains, etc.

Let a child draw on board or paper a number of mountains close together, then show him that by connecting these they form a chain of mountains. We also give it the name a *chain of mountains*.

WATER DIVISIONS

What do we call the waters that surround our earth?

Who can tell me the names we give to these large bodies of water?

Where shall we look for the Arctic Ocean? The Atlantic? The Pacific?

What did we learn the other day about the boundary of North America?

Now bound it again telling me the names of these bodies of water.

Now let us look for a sea. Where do you think we shall find one?

Do you see the word sea on the map anywhere?

That is it, that word tells us that we find a sea there; but before we find what name it has, let us see why we call that a sea and not an ocean.

You see we said the ocean was very large and strong and in many places it cuts deeply into the land. There

where the water bends and makes a turn it cannot be so strong and deep, still some of its water cuts into the land; therefore we call such a place where we find this, a sea, an arm of the ocean.

Now let us look at its name—

Teach in like manner gulfs and bays, straits, lakes and rivers. Let children point them out on the map. Drill thoroughly so they may be able to sketch the outline and mark on each body of land and water mentioned, its name.

CLIMATE AND PRODUCTIONS

PREPARATION:—*Use pictures, if possible.*

Do we have the same kind of weather every day?

No, sometimes it is hot, sometimes cold. Some days are rainy, and some are clear.

That is correct. We have hot, cold, mild, rainy, and dry weather. This state of the weather we call the climate. Some time ago you drew a map showing the cold, mild, and hot regions of the earth.

Refer to the map preserved. Now let us look at our own country. *Globe or wall map.*

COLD REGION

See the map of North America goes up toward the North Pole. What kind of weather should we find there?

It is very cold there.

Does the sun shine there as it does here?

No, it is farther away from the sun.

That part of our country is sometimes turned away from the sun, and the sun does not shine there for months. See, children, why it is so cold there. And even when this part is turned toward the sun, it is still very cold there.

In what kind of houses do the people live?

They live in huts made of ice.

What kind of clothes do they wear?

They wear the skins of animals.

NOTE.—Here speak to the children of the life of the Eskimo, his use of the reindeer, and Arctic dog, his food, means of obtaining it, etc.

Ask the pupils what plants grow in this cold part of North America. Draw out that the seal, walrus, eider-duck, white bear, reindeer, Arctic fox, and Arctic dog are found here. Speak of the use the natives make of these animals. Draw attention to the way in which God has suited the animals to the place. Now have them tell you about the few plants of this zone, the *lichens*, *moss*, *grass* and *stunted bushes*.

Note that the people must live on animal food, as there are no food plants here; animal food gives them heat and strength.

TEMPERATE REGION

Refer again to the map or globe. Let them see that as they travel south, the climate becomes gradually milder until at last they come to their own country, the United States.

Have them tell you what climate is found here. Refer to the four seasons, spring, summer, autumn, and winter.

The children can readily be led to tell the plants and animals of this region, because they are those they know.

You should refer to the *forests* in the northern, western, northwestern and southern parts of the United States; the *wheat region* in the central; the *potato region* in the northern and eastern part; the *corn and tobacco region* in the central and eastern part; the *cotton*, *sugar*, and *rice region*

in the southern part; the *cattle region* of the Western Prairies. Lead them to see that in the north the hardier plants grow, and as we come to the hot zone, we meet the plants of the hot zone. It is well to show them how many plants of our zone give us food, and show that more people live here than in the other zones. Speak of the fruit,—the apple, pear, peach, cherry, etc.

HOT REGION

Refer again to the map or globe. Notice that as we go further south in North America we come to countries that have a hot climate. It would be well to show that the change from extreme cold to great heat is gradual as we go from the north to the south.

As we go farther south, we come to very hot countries; have them named.

Mexico, Central America, and the West Indies.

Speak of the palms, bananas, oranges, pineapple, cotton, sugar-cane, coffee, and tobacco of this section.

NOTE:—Be careful to draw attention to the fact that the climate of a place determines the plants and animals that are found there. It is well to note that the work done by the people of the different sections depends, to a certain extent, on the productions of the place.

MINERALS

Ask what we burn in our stoves. You may get the answer *wood and coal*. Ask where the wood is obtained. Refer again to the forest regions of North America.

Ask where coal is obtained. This will lead to the mines. Let them tell you all they know of the miners and

their work, the dangers to which they are exposed. Show on the map where coal is obtained.

The mountains in the eastern part of our country.

Draw out from the children that *iron* is also obtained in these mountains.

Speak of *petroleum*. Show them pictures of the great wells, and derricks.

To get *gold* and *silver*, ask of what mineral their rings, earrings, breastpins, and the best spoons used at table, etc., are made. Tell them these minerals, *gold* and *silver*, are also obtained from mines but in a somewhat different way.

Show on map where these minerals are found. *In the mountains of the Rocky and Pacific Systems. The useful minerals are found in the eastern part of our country; the precious are found in the western part.*

INHABITANTS

Speak of the inhabitants of the different parts of North America. Draw out from the children the facts embodied in the following accounts:—

Caucasians, or Whites, are found throughout the whole of North America except in the northern part. They have good forms of government, are well educated in the arts, sciences, and manufactures. They are employed in all the different kinds of occupations; for instance, mining in a mountainous region; farming in a fertile region; manufacturing in a mountainous region and in large cities; fishing in those places near the water; and commerce in large cities on large bodies of water. They are well educated, especially those in the United States and Canada, where there are many schools and colleges.

Negroes, or Blacks, are found in the eastern, southern, and western parts of the United States, Mexico, Central

America and the West Indies. They are engaged in hotels and private families as servants and butlers. They are also engaged as hod-carriers, etc. On the cotton, rice, sugar, and tobacco plantations, they do most of the work. They were formerly slaves, but are now free, and some are quite well educated. They may hold offices under the government the same as the Whites.

- *Indians* are found in the western part of the United States, in Alaska, in the western and southern parts of the Dominion of Canada, in Mexico, Central America, and the West Indies. Some in the United States are civilized, live in houses, and cultivate their land. Those of other countries still lead a wild life, live in tents, hunt, and fish.

Mongolians are found in the northern part of the Dominion of Canada. They have some education, and are engaged in fishing, hunting, and in trading with the Caucasians. In the United States they are engaged in laundry work and as servants.

POLITICAL DIVISIONS

What color is the map of North America?

Now, why do you suppose there are so many colors in it?

Suppose you wanted to buy a pencil for each one of your brothers, would you buy them all of the same color?

Why would you get a different color for each one?

See, we have in North America different countries, and we can tell these different countries on the map by their colors.

How many colors do you see? What countries are they? In which one do you think we live?

What is the name of our country?

There is a large country to the north of us, what color is that?

This yellow country we call the Dominion of Canada.

Do you know anything about it?

Where is the Dominion of Canada? (It is north of the United States.)

What color has the country south of the one we live in? Point to it.

This country we call Mexico.

Where, then, is Mexico? (It is south of the United States.)

What country is in the middle? North of it? South of it?

There is one remaining. What is that?

To this country we give the name Central America.

What do we call it?

Do you know why?

What other word do we sometimes use in place of Central? (Middle)

Then, why did it receive the name Central America?

Central America is south of what?

North of what division of land?

Now tell me where it is.

Then let the children tell you all the countries and locate them.

For what was Columbus looking when he came to America? (The Indies.)

Did he think he had found them?

Were the islands which he discovered really the Indies?

Do you know what name is given to these islands?

We call them the West Indies.

The West Indies are southeast of what country?

In what water? To whom do they belong?

Now point to all the countries of North America, and tell me their names. Did we point to all the divisions of land now?

I see some other divisions.

Look to the north. What are these divisions of land surrounded by water?

And these islands we call Danish America, why?

Because they belong to a country called Denmark about which we shall study later on.

The large island we call Greenland. The small one Iceland.

What do we call the small one?

What do we call the large one?

Greenland is of Iceland?

Iceland is of Greenland?

Danish America is of North America?

North America is of Danish America?

REMARK:—Newfoundland should be taught with the Dominion of Canada. Alaska with the United States.

Draw a map, mark in the different divisions, color each slightly.

CITIES

Philadelphia and Washington.

Where does our President live?

Do you know something about this city?

Let us find it on the map.

Where should we always look when we wish to find Washington on the map? (Eastern part of the United States.)

Let children find out a few interesting facts from parents.

Tell those that may not be mentioned.

There is another large city about which you have often heard people speak. Where does our bishop live?

That city we call Philadelphia.

Get facts about it as before.

Let us find it on the map. (*North of Washington.*)

Where shall we always look for it?

Is it south of Washington? East? West? Is it north of it?

Washington is of Philadelphia.

Philadelphia is of Washington.

Train children to draw a rapid sketch map, and mark in the same the different places mentioned. It is well to number each place in the map; then to the side of the map, write the number and the name belonging to it.

Review

1. On what side of the earth do we live?
We live on the west side of the earth.
2. What do we call the west side of the earth?
We call it the Western Hemisphere.
3. What is the meaning of Hemisphere?
4. Name one of the divisions of the Western Hemisphere.
5. What is the division called in which we live?
It is called North America.
6. What ocean north of North America?
7. What ocean east?
8. What country south?
9. What ocean west?
10. Where is North America the widest?
About the centre.
11. Now tell what different divisions of land and water bound North America.

12. Name three peninsulas of North America.
13. Why are they called peninsulas?
14. Name two points of land jutting into the sea.
15. What else are they called?
16. What are small parts of land all surrounded by water called?

They are called islands.

Name four islands off the coast of North America.

17. Name the largest island northeast of North America.
18. Who was the first white man that visited the West Indies?

Columbus was the first white man that visited the West Indies.

19. What narrow strip of land joins North and South America?

The Isthmus of Panama joins North and South America.

20. In which part of North America does the surface or outside seem most uneven?

On the western side.

21. What are these high ridges of land called?

They are called mountains.

22. What big chains of mountains in North America?

Rocky and Pacific Systems.

23. Which are the highest?

The Rocky.

Which of these are so high that they are covered all year with snow?

24. Are there any parts of North America that are level land?

Yes, there is a part between the two big chains of mountains called the Central Plain. This part of

our land has a level surface, a fertile (or rich) soil, and is the greatest farming region in the world. There are forests in the north of this land, but the western and southern parts are grassy plains.

25. What river flows in the middle of this plain?
The Mississippi River.
26. Point to it on the map.
27. What oceans on different sides of North America?
The Arctic, Atlantic, and Pacific Oceans.
28. What large sea is south of North America?
The Caribbean Sea.
Point to it on the map.
29. What do you call waters that indent the land?
They are called bays or gulfs.
30. Name three. Point to each on the map.
Hudson Bay, St. Lawrence Gulf.
31. What do we call a narrow strip of water joining two larger portions of water and separating large portions of land?
We call them straits.
32. Name a strait that separates North America from another large portion of land. Point to it on the map.
Bering Strait.
33. What are portions of water that are surrounded by land called?
They are called lakes.
34. Name the five great lakes of North America. Point to them.
35. What do we call a stream of water flowing through the land?
We call it a river.

36. What river is nearest to us?
The Delaware River is nearest to us.
37. Name four rivers that flow through our country.
38. Let the pupils draw a map of North America showing the above.

THIRD GRADE ENGLISH

Language and Composition

Remark:—This work follows the plan laid down in the Second Grade. Use the reading lessons, nature lessons, stories from history, fairy tales, fables, and good pictures for oral and written descriptions and narrations.

- I. Call the children's attention to the nature of a complete sentence. Require such sentences orally and in writing. All written work should be done carefully.

METHOD:—Lead the child to see and realize that it takes words properly arranged to form a sentence.

Write on the board *John has a sharp knife*. Have this read. Now write *Knife has John sharp*, or *John knife sharp has*. Have this read. Ask whether these last two tell them anything. Ask why not. They will see that the words are not in their proper order. Therefore not a group of words alone, but a group of words properly arranged will make sense, or form a sentence. Try the same with other sentences.

Ask them to tell you what a *sentence* is.

II. Exercises in writing different forms of sentences, statements, questions, and commands.

Use of period, interrogation point, and exclamation point.

METHOD:—Under this head the names of persons, families, places, the days of the week, and the months of the year can be taught.

1. Ask:—

When do the birds return?

What do the birds do in spring?

Where do they go in autumn?

The birds return in spring.

Birds build their nests in the trees.

In autumn, many birds fly to warm lands.

Write the answers on the board. Tell the children that sentences which tell us something and describe things are called *statements*.

Ask what a statement does.

2. To bring out the names of places, ask the pupils:—

In what country do you live?

Of what land is it a part?

In what city do you live?

On what water is it?

On what street do you live?

We live in the United States.

The United States is in North America.

We live in Philadelphia.

Philadelphia is on the Delaware River.

I live on Brown Street.

3. Refer to the months of the year, asking what feasts and holidays occur in each:—
 In what month does Christmas come?
 When does Thanksgiving fall?
 How many days has January?
 Which is the shortest month?
 Tell me something about April.
 When is the feast of St. Francis?
 To whom is Saturday dedicated?

RESULTS

Christmas comes in December.
 Thanksgiving Day falls in November.
 January has thirty-one days.
 February is the shortest month.
 April rains bring May flowers.
 The feast of St. Francis comes in October.
 Saturday is dedicated to our Lady.

4. Speak of the president, the governor, the mayor, a general of whom they have read, any saint of whom they can tell you something. The following sentences will be an outcome of this:—

Washington was the first president.

President McKinley was shot.

Lincoln freed the slaves.

John Barry was the father of the Navy.

Robert Fulton invented the steamboat.

Grant was a great general.

Pope Pius X. was the Pope.

St. Anthony is a great saint.

I love our Blessed Mother.

St. Joseph loved the Child Jesus.

St. Agnes was a martyr.

5. The *interrogative sentences* may be obtained by telling the pupils to ask you a *question* about different months, days, places, persons. etc.

SUGGESTIVE WORK:—Ask a question about Columbus, Easter, Pennsylvania, Friday, coal, Wednesday.

RESULT

Did Columbus discover America?

Does Easter always fall on the same date?

Is iron found in Pennsylvania?

Why do we abstain on Friday?

Where is coal found?

Whom do we honor on Wednesday?

Call attention to the (?) at the close of each sentence. Tell them that these are interrogative sentences.

6. To obtain *commands*, ask what you would say if you wished the door closed, the window opened, the books collected, etc. Write the sentences on the board as given. Draw attention to the *period* at the close, and the *comma* after the name of the person to whom we are speaking.

RESULT

John, please close the door.

Mary, bring me a book.

Never tell a lie.

Children, love our Blessed Mother.

Harry, please collect the pens.

7. Write the following *statements* on the board. Require pupils to change them to *questions*:—
- William lost the ball.
The flowers will die.
John found a knife.

Harry is here.

The window was broken.

The weather is fine.

The United States is in the mild zone.

8. Have these sentences changed to *commands*.

EXAMPLE

Let William lose the ball.

Let the flowers die.

John, find the knife, *or* Let John find the knife.

Harry, come here.

Let the window be broken.

Let the weather be fine.

9. Have the following changed to *statements*:—

Is August a summer month?

Was Jesus born in Bethlehem?

Do we honor St. Joseph in March?

Must we hear Mass on Sundays?

Are you tall?

Is the rose a flower?

Are pansies beautiful?

10. Now draw attention to the fact that in making a *statement* or asking a *question*, or giving a *command*, we can show great surprise. Then our sentences will be *exclamatory* sentences. Help the children to form the following, and place the proper mark (!) at the end.

GIVEN

I see the sun.

The sun is bright.

We had fun.

I am so happy.

CHANGED

See the sun!

How bright the sun is!

O what fun we had!

Oh, I am so happy!

GIVEN

This is a pretty doll.
 The dew glistens.
 The stars twinkle.
 We are having fun.

CHANGED

What a pretty doll!
How the dew glistens!
How the stars twinkle!
Hurrah for the fun!

11. The following will show the use of (!), but they are not exclamatory sentences:—
Oh! the window is broken.
Hurrah! we won the game.
Hark! I hear a noise.
Hark! the clock is striking.
12. The work in homonyms under Word Study in this grade gives excellent drill in the different kinds of sentences. The following points are suggestions:—

Word Study

Thorough drill in the use and orthography of the words given below.

METHOD

1. Require the children to give sentences for the words, and have other children spell the words used.
2. Give sentences, and let different pupils spell the word you used.
3. Write the sentences on the board, leaving blank spaces for the word. Require the pupils to supply the proper words orally, and also in writing. Let the pupils tell the kind of sentence each one is.
4. Write the words on the board, and require the pupils to write sentences for each.
5. Vary your method.

<i>Sail</i>	{	The s of the ship are made of canvas.
<i>Sale</i>		The of the house was announced in the paper.

NOTE:—In placing these sentences on the blackboard for the pupils, do not put the words before the sentences as here shown, but place them in lists above the sentences. See that the words are not in the same order as the sentences.

<i>Do</i>	{	 your work neatly, my children.
<i>Due</i>		Honor is to our parents.
<i>Dew</i>		The refreshes the flowers.
<i>Clime</i>	{	The children of a northern dress in furs.
<i>Climb</i>		The bear can a tree.
<i>Him</i>	{	St. Francis de Sales did not wish anyone to honor
<i>Hymn</i>		 The Magnificat is our Blessed Mother's
<i>Die</i>	{	Every one must
<i>Dye</i>		Logwood makes a good
		 the eggs for Easter.
<i>Heal</i>	{	Christ did the sick.
<i>Heel</i>		Achilles could be wounded in the
<i>Grate</i>	{	The fire is burning in the
<i>Great</i>		Napoleon was a general.
<i>Pair</i>	{	A of gloves was found.
<i>Pear</i>		A is very nourishing.
<i>Pare</i>		We should always our apples before eating them.
<i>Way</i>	{	The to Heaven is narrow.
<i>Weigh</i>		 your words before speaking.

<i>Sow</i>	{	What you, you shall reap.
<i>Sew</i>	{	Every girl should learn to
<i>So</i>	{	As we live, ... shall we die.
<i>Sole</i>	{	To please God should be our aim.
<i>Soul</i>	{	Our is immortal.
<i>To</i>	{	We should love pray.
<i>Two</i>	{	 tens are twenty.
<i>Too</i>	{	Time flies swiftly.
<i>Tail</i>	{	A comet is a star with a
<i>Tale</i>	{	The was interesting.
<i>Steal</i>	{	 not. Thou shalt not, is a com- mandment.
<i>Steel</i>	{	 is manufactured in Pennsylvania.
<i>Pray</i>	{	 for the dead at noon and eve.
<i>Prey</i>	{	The eagle is a bird of
<i>Ring</i>	{	Ring out, ... out, ye merry bells.
<i>Wring</i>	{	The men their hands in agony.
<i>Rap</i>	{	 on the door before you enter a room.
<i>Wrap</i>	{	Did our Blessed Lady the Divine Child in swaddling clothes?
<i>Coarse</i>	{	 food is given to the poor.
<i>Course</i>	{	We should trace the of the river.

Busy Work on Sentences

1. Write a *question* about:—

fruit	the stars	kite
rain	country	carriage
soap	a bird	watch
trees	a knife	a horse

2. Change these sentences to *statements*.
3. Change these sentences to *commands*.
4. Use your name in a *statement*.
5. Use your father's name in a *question*.
6. Change the following to *questions*:

The father will bury the son.

A sparrow will eat a berry.

The boy was sick and pale.

The girl carried a pail of water.

NOTE:—Use in this way any of the sentences for homonyms already given.

7. Write statements using the words of each line.
 the — rises — sun — east — in — The —
 climb — bear — can — tree — a — A —
 neatly — your — Do — work —
 bird — tree — bough — the — nest — in — its —
 of — the — built — A
 loves — Blessed — Our — Mother — us.

NOTE:—The teacher can take any sentences and arrange them thus.

Write statements using the words joined in one sentence.

house—girl

hot—elephant

boy—bat

mild—wheat

mother—child

mat—cat

cotton—Negro

house—fire

reindeer—snow

water—fish

horse—cart

river—city

dog—cat

Joseph—Egypt

bird—tree

EXAMPLES

The *boy* will play with his *bat*.
 A *child* should honor its *mother*.
Cotton is picked by the *Negro*.

NOTE:—The two words taken need have no *apparent* connection in thought.

- III. a. Pupils to learn to distinguish nouns (names).
 b. Exercises in writing sentences from lists of nouns.
 c. Exercises in distinguishing common and proper names.
 d. Exercises in a few irregular plurals.

METHOD FOR A AND B.

1. Present an object to the class, ask for its name. Write the name on the board. Distinguish between the *thing* itself, and its *name* (the noun).

2. Present many objects, ask for the name of each, write these names in columns on the board.

Tell the pupils that *words* which tell the *name* of a thing, we call *nouns*. (*Nomen* is the Latin word for name, and our English word *noun* is derived from the Latin *nomen*.)

3. Ask the pupils to tell you in their own words what a *noun* is or does. (A noun is a word that tells the *name* of a thing.)

4. Ask the pupils to name:

3 plants	3 fruits	4 trees
4 tools	2 nuts	3 colors
8 toys	4 metals	2 saints
10 animals	2 games	3 vegetables
2 flowers	2 generals	3 rivers
3 fish		

The objects found in church—in the parlor—in the kitchen—in a grocery store—in a shop—in the schoolroom—in a bedroom.

The parts of a house—a chair—a knife—a book—a table—a clock.

Three things they can hear.

Three things they can taste.

Three things they can smell.

Three things they can think about, but not touch.

5. As these names are given, write them on the black-board. Ask what we call these *names*.

6. Drill till they know that a word used as a *name* is called a *noun*.

7. Write a list of nouns on the board, and let pupils write sentences containing these nouns. Some of the above could be given for *Busy Work*; though all of it should be taken orally at *first*.

METHOD FOR C.—Ask questions similar to the following:

On what street do you live? (proper noun.)

Where do you attend Mass? (common noun.)

In what church? (proper noun.)

Who discovered America? (proper noun.)

What was he? (proper noun.)

In what did he sail? (common noun.)

Each answer should be a complete sentence. As the words desired are obtained, write them in two columns, *proper* in one, *common* in the other. Lead the pupils to see that one of the columns contains *names* (nouns) that can be used for all objects of that kind, while the other column contains nouns that show which thing in *particular* is meant.

Mention different nouns, and let the pupils tell which mean a *particular one*, and which can be used for *any object like itself*. Now tell them that the first kind is called a *proper noun*; and the second kind is called a *common noun*. Draw attention to the use of the *capital letter* in the proper noun.

ANOTHER METHOD FOR C.

1. Take a knife, or any other object, from one of your pupils.
2. Send this pupil out of the room.
3. Give this knife to a pupil remaining in the room.
4. Call in the pupil to whom the knife belongs.
5. Tell him that you gave his knife to *a boy*, and he should get it from him.
6. He will tell you he cannot, he does not know *which boy* has it.
7. Repeat that a boy has it, he should pick out the boy.
8. He will still say that he does not know which one to pick out.
9. Tell him Harry has it.
10. He will go at once to Harry, and get his knife.
11. Ask why he could pick out the boy now. He will tell you because you mentioned his special name.

12. Draw the attention of the pupils to the **fact** that the name that picks out one from **many** others of the same kind is called a *picking out name*, or a *proper name*.
13. Show that *boy* (the common noun) named **them** all, but *Harry* (the proper noun) picked **out** which boy. This word *Harry* belongs to **this** boy, hence is called his property.

Proper is derived from the Latin *proprius*, which means special, particular.

14. Give common nouns and let the pupils **give a** *picking out* or *proper name*.

river.....Delaware

girl Mary

church.....St. Joseph's.

boy.....Harry

man.....Mr. Thomas

saint.....St. Agnes

city.....Detroit

building.....The City Hall

president.....President Roosevelt

Continue such work, writing the names in columns **on** the board. Afterwards head one column *common nouns*, the other *proper nouns*.

Drill for Busy Work

1. Point out the common and proper nouns in the following:—

John

boy

aunt

uncle

house

church

lake

city

Mary

Schuylkill

month

skate

city	school	Washington
Frances	Sunday	Pennsylvania
men	hotel	mountain
May		

Arrange the words in two columns.

2. Write 3 nouns that are names of persons.
Write 3 nouns that are names of places.
Write 3 nouns that are names of things.
Write 3 nouns that are names of particular persons.
Write 3 nouns that are names of particular places.
3. Have the pupils write sentences for the nouns given under 1.

METHOD FOR D.

1. Present one object to the class, ask for its name.
Write the name on the blackboard.
2. Present two or more objects of the same kind,
ask what we call these objects. Write the
name on the board.
3. Do this with a variety of objects.

Keep the words in separate columns, thus:—

<i>One</i>	<i>More than one</i>	<i>One</i>	<i>More than one</i>
book	books	glove	gloves
pencil	pencils	foot	feet
clock	clocks	hand	hands
pen	pens	eye	eyes
ruler	rulers	tooth	teeth
apple	apples	arm	arms
flower	flowers	head	heads
child	children	mouth	mouths

Mention a name, ask the pupils to tell what you would say for more than one of such objects.

stove	stoves
sister	sisters
knife	knives

4. Now give the names *singular* and *plural*.
5. You mention the *plural* noun, and let the children give you the *singular* from the list on the board.
6. Let children copy these lists on their slates.
7. Another day, give a number of *singular* nouns, and let the children write on their slates the *plural* of each.
8. Give a list of nouns, some *singular*, some *plural*. Let the pupils form two columns on their slates. Head one column *singular*, the other *plural*. Or, you can use the words *One* and *More than one*. Require the pupils to select from your list the singular and plural nouns, and write each in its proper column.
9. Take special drill on the formation of the plural by the addition of *s* or *es* to the singular. Such words as the following are best:

boy	cane	cat
hive	kitten	slate
book	dog	horse
doll	glass	house
tree	pencil	church

10. Take a special drill on the following irregular plurals:

tooth	... teeth	man	... men
goose	... geese	woman	... women
foot	... feet	mouse	... mice
ox	... oxen	child	... children

11. Let pupils form sentences for the singular and plural of these words.
12. Method for sentences for the singular and plural:—
 - a. Use objects at hand, require the pupils to *tell* you something or ask a *question* about *one*, then about *more than one*, and *vice versa*.

By this method obtain the following:—

The book <i>is</i> old.	The books <i>are</i> old.
The pencil <i>has</i> a sharp point.	The pencils <i>have</i> sharp points.
My pen <i>writes</i> .	Our pencils <i>write</i> .
This glass <i>breaks</i> easily.	These glasses <i>break</i> easily.

Write each sentence on the board, and notice the change in the *noun* and in the *verb* when *plural*.

- b. Write on the board and let the pupils give the plural:—

The boy runs.	The dog barks.
The girl laughs.	The cat's tooth is sharp.
The kitten plays.	The man works.
The woman sews.	The carpenter builds.
The farmer ploughs.	A goose has a long neck.
The ball rolls.	The mouse is small.
The ox is strong.	The fox is sly.
The knife is sharp.	The boy studies.

- c. Give sentences in the plural form, and require the pupils to write the same in the singular form.
- d. Give a list of simple nouns. Require the pupils to write sentences for these, and then to change their own sentences to the plural form.

- e. Let children write paragraphs from their Readers, and place one line under the singular nouns in the paragraph, and two lines under the plural nouns.

IV. Pupils to learn to distinguish between present and past tense of action words used in simple sentences. Writing of sentences from lists of verbs.

METHOD

1. Ask different pupils to tell you what a *child*, a *bird*, a *dog*, a *horse*, etc., can do or does. Put their answers on the board thus:—

A child	walks.	A bird	flies.
	plays.		sings.
	runs.		builds.
	sings.		chirps.
	shouts.		hops
A dog	barks.	A horse	gallops.
	bites.		neighs
	guards.		races.
	howls.		trots.
	whines.		whinnies.
A cow	gnarls.	A cat	kicks.
	moos.		scratches
	horns.		mews.
	chews.		purrs.
	lows.		plays.

A pig <i>grunts</i> and <i>squeals</i> .	A frog <i>croaks</i> .
A sheep <i>bleats</i> .	A cricket <i>chirps</i> .
A goat <i>butts</i> .	A bat <i>squeals</i> .
A goose <i>cackles</i> .	A parrot <i>chatters</i> .
A rooster <i>crows</i> .	A snake <i>hisses</i> .
A turkey <i>gobbles</i> .	The farmer <i>sows</i> .
A dove <i>coos</i> .	A bee <i>hums</i> .
A fish <i>swims</i> .	A rat <i>gnaws</i> .
An eagle <i>screams</i> .	A mouse <i>nibbles</i> .
A snail <i>crawls</i> .	A turtle <i>snaps</i> .
The wind <i>howls</i> .	A lion <i>roars</i> .
Fire <i>burns</i> .	A spider <i>weaves</i> .

2. Tell the pupils that these words which tell what things *do* are called *verbs*.
3. Let different pupils perform various actions and require the others to tell what they did. Have these short sentences written on the board. Require the children to point out the *verb*.
4. Take the sentences given above and change them to the plural form. Notice the change in the noun, and the consequent change in the verb.

Busy Work

1. Put nouns before these *verbs*.

..... bark	 run	 fall
..... neigh	 shine	 swim
..... skate	 jump	 trot
..... plow	 roll	 drink
..... balk	 spell	 study
..... play		

NOTE:—See that each noun begins with a capital letter as these are to be sentences, also that it is in the plural number, for these verbs are plural.

2. Write sentences for the following *verbs*:—

give	love	make
go	sink	swing
hang	read	strive
work	draw	eat

Draw *one* line under your *nouns*, *two* under your *verbs*.

3. Fill in these blanks with *nouns*:—

..... may go out to play.
 The was burned this morning.
 The graze in the field.
 will go with me.
 A encloses a field.
 Dogs bark at
 The can sew neatly.
 Large were caught.
 Men hunt
 Horses eat
 Cats catch
 Butchers kill
 Pupils write
 Sailors sail
 Engines pull
 bought a book.

4. Supply *verbs* in the following:—

Farmers corn, wheat, and hay.
 Bakers bread.
 Tailors coats.
 God good children.

Joseph to Egypt.
 Girls well.
 Children, ... your parents.
 The sun
 The cow us milk.
 Good children their parents.

PRESENT AND PAST TENSES METHOD

1. Ask the children to tell you something they must do

a. Every day	c. At home
b. In school	d. In church
2. Write their answers on the board.
3. Ask them to tell you that they did each of these actions

a. Yesterday	c. Last month
b. Last week	d. Last year
e. At any past time that you mention.	
4. Write each answer on the board opposite to the first sentences.
5. Tell them the first verbs are in the *present* tense, the second verbs are in the *past* tense.
6. Give drill in changing from one to the other.

Change these to the *past*:—

I *say* my prayers every day.

John *helps* his mother.

Harry *studies* well in school.

We *pray* in church every Sunday.

We *work* at home every morning.

We *say* our morning prayers.

RESULTS

I *said* my prayers yesterday.

John *helped* his mother last night.

2. Ask the pupils to tell you what you *did* in each instance (this will procure the *past* tense).
3. Let them tell you what you *have done* (this brings in the other form).
4. Write each sentence on the board as it is given.
5. Have these sentences read until the correct form is impressed on the mind.
6. Require the pupils to copy these on their slates.
7. Give a list of questions to be answered, using verbs:—

Who *drew* the picture?

Did the wind *blow* the tree down?

Did John *throw* the ball?

Has the tree *grown* since last week?

Has Kate *written* her lesson?

Who *has broken* her pencil?

Have you *taken* your medicine?

8. Make a chart of sentences for this work. Take a few minutes drill in reading the same, daily.

Drill Chart

1. The boy *came* home last night.
The boy *has come* home.
2. The girl *drew* a picture.
This picture *was drawn* by Mary.
3. Mary *broke* her doll.
Joe *has broken* the pitcher.
4. I *wrote* a letter yesterday.
Mary *has written* her lesson well.
5. My hat *blew* away.
The wind *had blown* all night.
6. John *threw* the ball to me.
John *has thrown* the ball to me.

7. The rose *grew* in the garden.
The rose-bush *has grown* very tall.
8. I *took* my books home.
Mary *was taken* to the hospital.
9. Take a drill similar to this, *orally* one day, and in *writing* the next.
10. Use some form of *come* with:
- | | | |
|------------|-----------|------------|
| yesterday | has | is |
| tomorrow | on Monday | last week |
| next month | have | last night |
| had | | could have |

RESULT

- John *came* to school yesterday.
The circus will *come* here next month.
Spring is *come* again.
Alice *came* back on Monday.
I *came* last night.
Mary will *come* to see you tomorrow.
The letter had *come* before I left.
Father has *come* home.
We have *come* early today.
John would have *come* sooner.
My aunt *came* to see me last week.
11. Repeat this exercise with the other verbs given.
12. With the verbs *write, break, draw, take, and throw*, you can use the following as well as those already mentioned:—*is, was, had been, could have been*.

V. Give lists of nouns and verbs and have the children write sentences for them. Now draw attention to the formation of the sentences, show that there is always a **verb** in the sentence, and nearly always a **noun**. Refer again to the **complete** or **full thought** expressed in the **sentence**.

VI. Teach the use of **there is** and **there are**.

Teacher:—What is there on the table? on the blackboard? on the desk? in your hands?

Pupil:—There is a book on the table.

There is a picture on the blackboard.

There is a pencil on the desk.

There is an apple in my hand.

Teacher:—Put another pencil on your desk. Now tell me again.

There are two pencils on my desk.

By questioning draw out the following and have each answer repeated a second time, then copied on the slates:

There are a ball and a cube on the desk.

There is a vertical line on the blackboard.

There is a picture of a house on the blackboard.

There are an inkstand and a blotter on the desk.

There is a child on the platform.

There are children on the platform.

There is a pencil on my desk.

There is a book on my desk.

There is a pen on my desk.

There are a pen, a book, and a pencil on my desk.

Give sentences containing blanks to be filled in with *there is* and *there are*.

VII. Teach the pronoun. Let the children point out the pronouns in the sentences. Drill on their use.

METHOD

1. Send a child to open the door, or to perform some simple action. Then ask, "Who opened the door?" Write on the board the answer given. Harry opened the door. Tell me that Harry opened the door, but do not mention Harry's name. *He* opened the door. Ask what word we used instead of Harry. Underline this word.

2. Call on a girl to perform some simple action. Ask who did it, and proceed as before. This will bring out the use of *she*; as,

Mary closed the shutter.

She closed the shutter.

Ask for the word used instead of Mary, and underline it.

NOTE:—The answers will depend on the questions asked.

3. Call on a child to perform an action. Ask the child to tell you what it did. Write the answer on the board. Ask what word he used instead of his own name and get the use of *I*.
4. Tell the children that these words used instead of *names*, or *nouns*, are called *pronouns*. (*Pronoun*, for a noun).
5. Write on the board, *Mary saw John, and John saw Mary*.

Ask the pupils to read this without repeating John's name or Mary's name, and obtain:

Mary saw John, and *he* saw *her*.

Ask them to read it without using any names.

He saw *her* and *she* saw *him*.

Draw attention to the words that are used in place of the nouns.

Ask for their name (pronouns).

6. Let the children tell you what a *pronoun* is.
7. Give sentences containing pronouns. Let the pupils copy, underlining the pronouns.

Drill

It is *I*. It is *he*. It is *she*. It is *we*.

Teacher:—Was it *you* whom *I* met last night?

Answer either. It was *I*. It was not *I*.

Teacher:—Was it George whom I heard talking?

Answer, not using George's name.

It was *he*. It was not *he*.

Is it Henry who is ringing the bell?

It is *he*. It is not *he*.

Was it Mary who came early? (Do not mention **name** in answer.)

It was *she*. It was not *she*.

Was it James who came early?

It was *he*. It was not *he*.

Tell me it was you and Mary who saw the accident.

It was Mary and *I*.

Tell me this using two pronouns, no names.

It was *she* and *I*.

Tell me this using one pronoun for *you* and *I*.

It was *we*.

Tell me it was Mary and George who rang the bell.
(No names.)

It was *she* and *he*.

Tell me using one pronoun.

It was *they*.

Direct a pupil to stand. Ask, "Who is standing?"

I am standing.

Tell me, it is you who are standing.

It is *I* who am standing.

Ask a pupil not standing and obtain:—

It is not *I*.

Let a boy and girl stand. Ask, "Is it Lucy who is standing?" "Is it James who is standing?" and obtain:—

It is *she*. It is *he*.

In a similar way obtain:—

It is *we*. It is *they*.

Drill Chart

It is *I* who am standing.

It is *he* and *I* that are lifting the chair.

It is *we* that are reciting.

It is *he*, *she*, and *I* that are looking out of the window.

It is *you* who are hearing our lesson.

It was *we* that opened the door.

It was *she* that was walking.

It was *they* who were whispering.

It is *you* who were writing on the board.

Busy Work

FILL IN BLANKS:—

1. There a blackboard in our room.
2. There six candlesticks on the altar.
3. there a cake in the closet?
4. Yes, there seven when I looked there.
5. there any roses on the bush?

6. No; there not one left.
7. There thirty girls in our class.
8. There but one God.
9. Who took my umbrella? It was
10. Was it your brother who played? No, it was not
11. Is that the Bishop? Yes, it is
12. Is your mamma calling? Yes, ... is.
13. Did those girls bring the flowers? It was
14. Was it you who spoke? Yes, it was

VIII. Drill in the use of possessive forms.

METHOD

1. Let the children change slates, books, pencils, etc., with one another. Then ask questions, and write the children's answers on the board.

John, whose book have you? (I have Mary's book.)

Whose slate have you, Mary? (I have Clara's slate.)

Whose ruler have I? (You have Jennie's ruler.)

Who has John's hat? (Tom has John's hat.)

Where is Alice's box? (Alice's box is on the desk.)

2. When the first sentence has been given, you can say:

See how I write the word Mary in this sentence.

Notice the little mark with the s after the word (Mary's).

That little mark (') is called an apostrophe. What is it called?

Who knows what that little mark after Mary tells me?

(It tells you that something belongs to Mary.)

Yes, when you see (') or ('s) at the end of a noun, you know that something belongs to the one whose name has this mark after it.

If I say *Mary's hat is lost*, what do I mean?

(You mean the hat belonging to Mary is lost.)

What shows me that the hat belongs to Mary?

(The 's after Mary shows you.)

3. Draw attention to the possessive sign in each sentence written. Ask its use, or meaning, also what the sentence tells.

Drill

Write the following sentences on the board, and have them copied to impress the possessive form on the children's minds:—

The teacher's bell is on her desk.

The duck's foot is webbed.

The hen's head is small.

The cat's fur is soft.

The horse's mane is long.

The dog's eyes are bright.

The baby's blocks are made of wood.

Have you seen John's slate today?

Mary's cloak and hat are new.

Last Sunday George's dog was lost.

Mr. Mason's children are kind to one another.

Mrs. Smith's boys are polite.

General Sherman's son is a Jesuit.

Whenever the ('s) or the (') occurs in the Reading Lesson or in the written work of the children, draw the pupils' attention to it. Ask why it is there, and what it tells.

IX. Drill in Combining Sentences.

Give the simple sentence. Aid the children in writing them. Draw attention to the (,) and the (and) joining them. Oral and written.

Simple

Combined

John came down.	}	John came down and start-
John started the fire		ed the fire.
Mary came up.	}	Mary came up and swept
Mary swept the room.		the room.
The horse ran off.	}	The horse ran off and hurt
The horse hurt himself.		himself.
The train came.	}	The train came, stopped,
The train stopped.		and left again.
The train left again.		
Henry came out.	}	Henry came out, took the
Henry took the axe.		axe, and split the wood.
Henry split the wood.		
Joseph came in.	}	Joseph came in, opened the
Joseph opened the book.		book, and studied the les-
Joseph studied the lesson.		son.
The dog broke loose.	}	The dog broke loose, ran off,
The dog ran off.		and killed the sheep.
The dog killed the sheep.		
The tree bent.	}	The tree bent, broke, fell,
The tree broke.		and made a loud crash.
The tree fell.		
The tree made a loud crash.		

Let farmers plough.	}	Let farmers plough, sow, and reap.
Let farmers sow.		
Let farmers reap.		

Let boys play marbles.	}	Let boys play marbles, fly kites, and be happy.
Let boys fly kites.		
Let boys be happy.		

Will the clouds come?	}	Will the clouds come, the lightning flash, and the thunder roll?
Will the lightning flash?		
Will the thunder roll?		

Will the snow melt?	}	Will the snow melt, the win- ter pass, and the grass grow green?
Will the winter pass?		
Will the grass grow green?		

Oh! how the wind blows!	}	Oh! how the wind blows, the rain falls, and the streams rise!
Oh! the rain falls!		
Oh! how the streams rise!		

Alas! my dress is torn.	}	Alas! my dress is torn, my hands are hurt, and my face is scratched.
Alas! my hands are hurt.		
Alas! my face is scratched.		

2. Reverse the work, give the combined form and get the simple.

Combined

Simple

The horse and the cow were	}	The horse was lost.
lost.		The cow was lost.

John, Henry, and James went	}	John went to church.
to church.		Henry went to church.
		James went to church.

Let the sheep and lambs into	}	Let the sheep into the field.
the field.		Let the lambs into the field.

X. Exercises in filling blanks of elliptical sentences from the reader.

The following will illustrate what is meant:

Supply these words in their proper places:—

THE CUNNING CAT

mice	roll	caught	mat
paws	sprang	up	cunning
ball	little	nibble	fire
asleep	sleep	room	

On a by the in the hall, a old cat lay down to If I myself up like a, thought she, the little will think I'm

Soon the little peeped into the Thinking the old cat was they began to and lick their Then the cat jumped and them all.

XI. Exercises in copying simple verses from the blackboard, and from charts, and books.

VIOLETS

O wind, where have you been,
 That you blow so sweet?
 Among the violets
 Which blossom at your feet.
 The honeysuckle waits
 For summer and for heat;
 But violets in the chilly spring
 Make the turf so sweet.

If a task is once begun,
Never leave it till it's done;
Be the labor great or small,
Do it well or not at all.

Hearts like doors will open with ease
To very, very little keys;
And don't forget that two are these:
"I thank you, sir," and "If you please."

Kind hearts are the gardens,
Kind thoughts are the roots,
Kind words are the blossoms,
Kind deeds are the fruits.

Little children, you should seek
Rather to be good than wise;
For the thoughts you do not speak
Shine out in your cheeks and eyes.

For he who always does his best,
His best will better grow;
But he who shirks or slights his task,
He lets the better go.

Whichever way the wind doth blow,
Some heart is glad to have it so.
Then blow it east or blow it west,
The wind that blows, that wind is best.

The year's at the spring,
 And day's at the dawn,
 Morning's at seven,
 The hillside's dew-pearled,
 The lark's on the wing,
 The snail's on the thorn,
 God's in His heaven,
 All's right with the world.

WINTER JEWELS

A million little diamonds
 Twinkled on the trees,
 And all the children said:
 "A jewel, if you please!"
 But while they held their hands outstretched
 To catch the diamonds gay,
 A million little sunbeams came
 And snatched them all away.

When I go to bed I say, "Good night."
 When I get up I say, "Good morning."
 I always say, "Thank you."
 Polite boys and girls say, "If you please."

How does the little busy bee
 Improve each shining hour,
 And gather honey all the day
 From every opening flower!
 How skilfully she builds her cell,
 How neat she spreads her wax;
 And labors hard to store it well
 With the sweet food she makes.

Watch over me while I'm asleep,
 And every night above my head
 Bend down, dear Angel, o'er my bed.
 Walk by my side to guard and bless;
 Talk to me all along the way,
 And while I hearken what you say,
 Lest I should fall help me to stand;
 I pray you, Angel, hold my hand.

XII. Abbreviations.

As we are soon to write letters, we need certain short forms called abbreviations. The following should be drilled upon—

Sunday	Sun.	January	Jan.
Monday	Mon.	February	Feb.
Tuesday	Tues.	March	Mar.
Wednesday	Wed.	April	Apr.
Thursday	Thurs.	August	Aug.
Friday	Fri.	September	Sept.
Saturday	Sat.	October	Oct.
Post-office	P. O.	Postscript	P. S.
Reverend	Rev.	Pennsylvania	Pa.

In the *Arithmetic Class* we can introduce the following as they are needed:—

dozen	doz.	inches	in.
pound	lb.	feet	ft.
quart	qt.	yard	yd.
pint	pt.	hundred weight	cwt.
Before noon	A. M.	After noon	P. M.

Review those of former grades. For drill, dictate these words, let the pupils write them *in full*, and afterwards for *Busy Work*, fill in the abbreviations.

Or, write the abbreviations on the board, require the pupils to copy them in a column, and in another column, opposite to each, let them write the words in full. Whenever you meet them in the different lessons, draw the attention of the pupils to them.

XIII. Letter Writing.

METHOD

1. Speak of letters, their use, neatness to be observed, kinds of paper, ink, and stamps.

2. Place the form and diagram on the board. On the next board, write the letter itself. Draw attention to each part of the letter. Give the name of each. Have the same copied on paper.

Heading {
 {

.....Salutation.

Body

.....

.....

.....

.....

Conclusion

Signature

Philadelphia, Pa.,
November 3, 1906.

Dear Rex:

Walter and I are making our garden. We raked up all the dead leaves yesterday, and today we have been spading it.

Don't you want to come and help us? Bring your express-wagon and we will haul stones for a farmer.

Your friend,

Eddie Martin.

The first two letters and envelopes should be written on the blackboard. The teacher should draw the attention of the pupils to each part of the letter. The pupils should copy the letter carefully on paper.

The remaining letters are given simply as models.

The pupils should be told to write a letter about this or that particular subject. The teacher may *read* one of these letters as a model for the class, but she should *not* give them to the pupils to copy.

Stamp

Master Eddie Martin,
1151 Poplar Street,
Philadelphia,
Pa.

Philadelphia, Pa.,
Nov. 4, 1906.

Dear Eddie:

If it is pleasant, I can spend next Saturday morning with you. Look for me about nine o'clock.

I have taught Max to draw my express-wagon. I will make him bring it, and we shall have grand fun hauling stones.

Your friend,

Rex Brown.

Philadelphia, Pa.,
May 10, 1907.

Dear Mary:

Tomorrow will be my birthday. Mamma says I may have a party. I want you to come and bring all your dolls. Come early and we will have a good time.

Your friend,

Elizabeth.

Philadelphia, Pa.,
May 14, 1907.

Dear Elizabeth:

Thank you very much. I will come to the party and bring all the dolls.

Mildred has a new pink silk dress.

Your friend,

Mary.

Write a letter to a friend telling him of a new sled you received at Christmas.

Philadelphia, Pa.,

Jan. 8, 1907.

Dear Frank:

Santa Claus brought me a bright, new sled. It has fine steel runners. Its name is Sport.

I am going to try it on the hill back of our house, Saturday morning.

Will you come and join me?

Your friend,
Edgar Blank.

Answer this letter.

Philadelphia, Pa.,

Jan. 9, 1907.

My dear Edgar:

I am very glad Santa was so kind to you.

You may look for me about 9 A. M., Saturday. I will bring my skates with me.

Your friend,
Frank Conway.

Write a letter to a little girl friend, telling her of your new doll.

Trenton, N. J.,

Jan. 26, 1907.

Dear Mary:

Mamma gave me a pretty baby doll for my birthday. I wish you could come to see it. Bring your own doll with you and we shall have a pleasant time.

Your friend,
Stella.

Answer this letter.

Trenton, N. J.

Jan. 27, 1907.

Dear Stella:

I shall be pleased to come to see your new doll. Mamma has made a new dress for mine. I will bring her in her new coach.

I know we shall have a nice time.

Your friend,

Mary.

It is your mother's birthday, write her a letter.

Mobile, Ala.,

Sept. 28, 1906.

Dear Mother:

This is a happy day for us because it is your birthday. I wish to tell you how much I love you, dear mother, and hope you will have many more birthdays.

I will pray God to bless you and to make me a good child.

Your loving little girl,

Helen.

A letter telling how glad you were to receive a letter from home.

Washington, D. C.,

Oct. 4, 1906.

Dear Parents:

How I have been longing to hear from home!

You may think then how happy I was when the post-man brought me your letter.

Your loving son,

Henry.

An invitation to spend Christmas week.

Boston, Mass.,
Dec. 20, 1907.

Dear John:

It will soon be Christmas, and there will be no school for a week. My mother says I may ask you to spend the holidays with me. I have two pairs of skates and a new sled. We can have a very good time.

Your loving friend,

Frank.

New York,
May 2, 1907.

Dear Helen:

Will you please lend me your "*Fairy Tales*"? Send it by Charlie. I am in a hurry to read it. I will lend you my "*Chatterbox*."

Your little friend,

Nellie.

New York,
May 3, 1907.

Dear Nellie:

Grace has my "*Fairy Tales*" so I send you my "*Robinson Crusoe*". You shall have the "*Fairy Tales*" next.

Your little friend,

Helen.

An invitation to tea.

West Chester, Oct. 14, 1906.

Dear Miss White:

Papa and mama join me in asking you to take tea with us next Friday evening at seven, and they share my hope that you will find time to do so.

Your faithful pupil,

Answer

Hilda.

West Chester, October 15, 1906.

My dear Hilda:

Please present my compliments to your mama and papa and tell them it will give me great pleasure to accept your kind invitation to tea next Friday evening.

Your devoted teacher,

Mary White.

You have been promoted. Tell how you like your class and teacher. Tell how hard you are trying. Speak of your gold-fish. Send love to all at home.

Boston, Mass.,

Sept. 12, 1907.

Dear John:

I have been promoted, and I like my new class and my teacher very much.

I am trying very hard this term. What class are you in now?

We have some gold-fish in our room, and I help my teacher to take care of them.

With love to all at home,

Your friend,

Will.

Tell your friend how you spent May Day.

Bally, Pa.,

May 14, 1907.

Dear Anna:

Last Tuesday we had no school for it was May Day.

In the morning I helped my mother by taking care of the baby. In the afternoon my father took me out for a walk.

Write soon, and tell me about your lessons and school.

Your friend,

Marcella.

An answer to an invitation for Christmas week.

Erie, Pa.,

Dec. 10, 1907.

Dear cousin Frank:

How glad I am that you are to spend your Christmas vacation with me. What fun we shall have!

Father has promised me a new sled and a pair of skates.

If the weather is cold, we shall have a fine time coasting and skating.

Do not fail to come. I shall meet you at the station.

Your loving cousin,

Edwin.

An invitation to spend the afternoon.

Ashland, Pa.,
June 4, 1907.

Dear Gertrude:

How I wish you could spend an afternoon with me! Can you come next Friday at two o'clock? Please let me know as soon as possible.

Dora will make us some cakes and peanut candy.

Your little friend,
Clara.

An invitation to a birthday party.

Wilmington, Del.,
Aug. 22, 1907.

Dear John:

My dear mother is going to give us a party on my birthday, next Thursday, August 27th, at 4 P. M., and we would like to have you with us.

I hope that nothing will prevent you from coming.

Yours truly,
Frank.

Letter begging to be excused for absence from school.

Lakewood, N. J.,
Oct. 17, 1907.

Dear Teacher:

Please excuse my absence from school Monday, the 18th, on account of the illness of my mother, and oblige,

Yours truly,
Rose Brady.

A letter telling about your school.

Richmond, Va.,
Dec. 1, 1907.

Dear Frances:

I am going to school every day, and am very fond of my teacher. She tells us a pretty story after we have had our lessons. I hope you will soon be able to come to school.

Your loving friend,
Lily.

A letter to your mother who is away, telling her all you are doing.

Lancaster, Pa.,
June 15, 1907.

Dear Mamma:

I will tell you what we are doing at home. Papa says he thinks I keep the house tidy. Every morning I dress sister Regina.

Before I play the piano, I sweep the porch and help Martha with the dishes.

We have fresh flowers every day. We all send our best love to you, and wish you a pleasant time.

Your little girl,
Mary Cain.

Richmond, Va.,
November 2, 1906.

Dear Alfred:

Thank you for your kind letter. I often wish I could visit you, and Papa says that he will take me some time.

It must be fine to have a goat. I have a pair of white rabbits that Grandma gave me for my birthday. I wish you could see them.

Good-bye. Hoping that I may see you soon, I am,

Your friend,

Thomas Brown.

Atlanta, Ga., Aug. 15, 1906.

Dear Louisa:

I came here this morning about nine o'clock. The train was nearly an hour after time. I found cousin George here. He has come to spend his vacation. He and I are good friends.

Tomorrow we will gather berries that grow half a mile from the house.

Give my love to all.

Your loving brother,

Harry Thorn.

Philadelphia, Pa.,

Sept. 12, 1906.

Dear Joseph:

There is to be a game of base-ball in the Meadows, Saturday afternoon. Uncle John says he will take us in the carriage, if you will go.

Your playmate,

Karl Fisher.

A letter to Santa Claus.

Mahonoy City, Pa.,
Dec. 18, 1907.

Dear Santa Claus:

Since last Christmas I have a baby sister. Please bring some Christmas presents for her. I think she would like a rubber doll and a rattle. If you bring me a picture book and a go-cart, I shall be very glad.

Your loving friend,
35 Linden Ave. Grace Darling.

New York, N. Y.,
Dec. 24, 1907.

My dear, kind Parents:

Tomorrow is Christmas, and when I kneel before the crib, I will thank the Little Infant for the good papa and mamma He has given me.

I am going to be a better child, and always love and obey my dear parents.

Wishing you a Merry Christmas, and a Happy New Year, I am,

Your own dear child,
Raymond.

Boston, Mass.,
December 24, 1906.

My dear Papa and Mama:

A Merry Christmas and a Happy New Year to you!

May the dear Infant Jesus in the crib bless you for all the good you have ever done me and let you live many years, is the prayer of,

Your own little pet,
Esther King.

Your papa took you

1. To a circus.
2. To a park.
3. To a picnic.

Write a letter to a little friend, telling how you enjoyed the trip, also something you saw.

Philadelphia, Pa.,
Sept. 20, 1907.

Dear Joseph:

Do you want to hear some good news? Our side won the game that was played last Saturday.

John Lane took your place.

We hope you will be able to play the next time.

Your playmate,
Bernard Heilker.

St. Agatha, Ont.,
Dec. 23, 1907.

Dear Papa and Mama:

The coming of the Holy Infant makes every little boy and girl think of how good and obedient He was.

I know, dear papa and mama, how often I have made you feel sad by disobeying you; but now I am oh! so sorry for all, and I am going to be a better child hereafter.

Dear Jesus, bless this promise, and my dear papa and mama, too, and let them spend a merry, merry, Christmas.

Your little girl,
Jennie Brand.

Write a short letter answering an invitation to spend your vacation with your uncle on his farm. Thank him

and say your father has promised to let you come if you study hard. Say that your father and mother wish to be remembered kindly.

Write a letter to your teacher telling how you spent the time between Friday and Monday.

Write a letter to a friend inviting him to spend next Saturday with you. Tell him that your mother says you may spend the afternoon skating on the pond, which is covered with hard, smooth ice.

Write to a friend telling how you spent Christmas, and what presents you received and from whom. Ask your friend how she (or he) spent Christmas, and what presents she received.

Write a letter to a little cripple. Tell him of a present you are sending and that you hope he will enjoy it.

Answer the above, telling how the gift pleased you.

XIV. PUNCTUATION

Teach the use of the period, the interrogation and exclamation points, the comma, the apostrophe, the quotation marks, the caret and the capitals, as indicated in the following:

1. THE PERIOD:—

This point is drilled on in the lessons on the kinds of sentences. Watch its use in all the written work. See that the title of every composition or exercise is followed by a period. Call attention to the use of a period in the reading lesson, in the abbreviations used in their work, in the heading and closing of the letter and the superscription of the envelope.

Ask why the period is used in this or that instance. Let them tell you in their own words.

For special drill, dictate any of the *statements* and *commands* already given in this work, also these:—

We saw Charles and Emma.

This book is yours.

Birds pick cherries.

Snap, put down that rat.

My brother and I will go.

Calla-lilies are large, white and fragrant.

Fido, come to me.

Please hand me a pencil.

Please, James, call Mary.

2. THE INTERROGATION POINT:—

Pay particular attention to this mark at the close of interrogative sentences. Dictate a few of the interrogative sentences given under that head in the first part of this book, or these:—

Where are the flowers?

Who has my knife?

Where are you going?

Have you read the book?

Eddie, will you ride to the farm?

3. EXCLAMATION POINT:—

Note this mark in the exclamatory sentences, and after interjections. Dictate:—

Hark! mother is calling us.

Oh! what was that?

O, what a beautiful bird it was!

Listen! there goes the bell.

4. THE COMMA.

a. *After the name of a person addressed.* You call attention to this in the sentences expressing a command or a question. Drill for dictation:—

James, are you going to mow the lawn?

Nellie, bring me the ink.

Sarah, please carry the basket.

William, are you going to the store?

William, go to the store.

NOTE:—Show that we mention the name to draw the person's attention, and we naturally pause after the name.

b. Use of the comma in dating, heading, addressing, and closing a letter, also in the superscription of the envelope. Dwell on this when teaching the letter-writing, and there will be no need for an extra dictation.

5. THE APOSTROPHE.

The use of the apostrophe in contractions is dwelt on when they are taught.

Its use in the possessive case has been mentioned already. Draw attention to it whenever it occurs in the reading or in their language work.

Dictate for drill:—

Nellie's cloak is new.

The lady's dress was ruined.

O, how high George's kite flies!

Aren't you tired?

John, isn't this your coat?

Can't Alice write her lesson?

The boys' clothes aren't torn.

Did you see John's father?

I'm going home.
 He's hurt.
 You're very happy, Mary.
 The boats' oars are strong.
 Cats' claws are sharp.
 We sell children's shoes.

6. THE QUOTATION MARKS.

Direct quotations will occur quite often in the reading lessons, hence it is necessary to teach their use. Show that unless the exact words or thoughts of another are used, the quotation marks are not used. Note the use of the comma before the quotation.

Drill for dictation:—

The little girl said, "I am going home."
 I said, "I saw James."
 I said that I saw James. (Not a direct quotation.)
 He replied, "I will return."
 He replied that he would return. (Not direct.)
 Harry called out, "That bat is mine."
 Eva said, "I've found it."
 "We will come tonight," the children said.
 Our teacher said, "Your answer is correct."
 Tom called after us, "Aren't you coming?"
 The dying general said, "I die happy."

7. THE CARET.

Show the pupils how to use this when they have omitted anything. You will use it in correcting their exercises.

8. CAPITALS.

a. The first word of every sentence. This is dwelt on from the First Grade on. Any of the sentences already given can be used for dictation.

b. The first word in every line of poetry. Draw attention to this in the *memory gems* and in the *selections* studied. Use a few of these for dictation.

c. Names of God. This should be noticed in the Catechism Busy Work. Any sentences there given can be used for dictation.

d. Proper Names. The use of the capital in these should be dwelt on when teaching proper nouns.

Dictation:—

Where is St. Joseph's school?

We live in Philadelphia.

My cousin lives in Wilmington.

We row on the Schuylkill River.

The State House is an old building.

Girard College is very large.

The Public Buildings are at Broad and Market Streets.

Broad Street is very wide.

Does Market Street extend to the Delaware River?

Chestnut Street is quite narrow.

e. Titles of office and respect. This may be brought in incidentally, also when teaching the abbreviations.

Dictate these:—

Rev. James Higgins is our pastor.

General Grant was our president.

Dr. Brown cured my sister.

Mr. Thomas is a lawyer.

Archbishop Ryan was a great speaker.
President Roosevelt was a brave soldier.

f. In the abbreviations for the names of the months and days of the week. This is dwelt upon when the different abbreviations are taught. Its use occurs also in letter-writing.

In all this dictation work,

1. Write the sentences on the board.
2. Study them with the child.
3. Draw his attention to the spelling and punctuation.
4. Let him copy the exercise from the board.
5. Cover the exercise and dictate.
6. Uncover, and let the children compare their work with the copy on the board.

NOTE:—Be careful to dictate in a clear tone. Do not repeat. Dictate sufficient at a time to give the child some idea.

XV. COMPOSITION

Writing of Short Compositions

METHOD

Have pupils write *answers* in *whole* sentences or statements.

The following are suggestive of what may be done in this line.

The questions should be placed on the board and the lessons developed orally. Group the questions into paragraphs, and lead the pupils to see why you do so; namely, that the sentences connected with one particular thought should be together.

Sometimes it is well to write their answers in succession on the board and then aid the children to unite them into paragraphs. Work with them. Have the entire composition copied.

After the subject has been developed orally, have the pupils write answers to the questions without any aid from you.

Make one sentence of these five:—

1. The fly has six legs.
2. The bee has six legs.
3. The wasp has six legs.
4. The ant has six legs.
5. Other insects have six legs.

RESULT

The fly, the bee, the wasp, the ant, and other insects have six legs.

Combine into one sentence:

1. Spiders spin.
2. Spiders weave.
3. Spiders hunt.

RESULT

Spiders spin, weave, and hunt.

Combine into one sentence:

1. The fly does not grow after getting legs.
2. The fly does not grow after getting wings.

RESULT

The fly does not grow after getting legs and wings.

Combine the following in such a way as to give but three sentences:

1. Here is a fly.
2. This fly lives in our houses.
3. See his two large eyes.
4. They take up nearly the whole of his head.
5. The fly has two wings.
6. The butterfly has four wings.
7. The bee has four wings.
8. Most other insects have four wings.

RESULT

Here is the fly that lives in our houses.

See his two eyes that take up nearly the whole of his head.

The fly has two wings; but the butterfly, the bee, and most other insects have four wings.

Put these together so as to form three sentences:

1. The fly first brushes one side.
2. He then brushes the other side.
3. Then he rubs his legs together.
4. This drives the dust out of the hairs.
5. After this he gives himself the finishing touches.

RESULT

The fly first brushes one side, then the other. Then he rubs his legs together to drive the dust out of the hairs. After this he gives himself the finishing touches.

Write in three sentences:

1. An aunt was working.
2. She was making a storehouse.
3. She was filling it.

4. She was tugging at a grain of rice.
5. A friend was helping her.
6. The grain was bigger than themselves.
7. A grasshopper came up.

RESULT

An aunt was busy at work one sunny summer day. She was making a storehouse and filling it with food for her family.

Just as she and a friend were tugging along a grain of rice much bigger than themselves, up came a lively grasshopper.

Put these sentences together:

1. A man put up his gun to shoot the dove.
2. The ant bit the man's heel.
3. Bang! went the gun.
4. The dove was not hurt.
5. The ant helped the dove.
6. The dove helped the ant.
7. Shall we help each other?

RESULT

Two or three days after, the ant saw a man put up his gun to shoot the poor dove.

The ant crept up and bit the man in the heel. The gun went off, but the dove was not hurt.

So the ant and the dove helped each other. Shall we, too, try to help each other?

Put these sentences together:

1. A faint gray light begins to steal over the woods.
2. A faint gray light begins to steal over the fields
3. The stars all fade out from the sky.

4. They fade out one by one.
5. A light breeze springs up.
6. The breeze sets the leaves and the flowers all nodding and whispering to each other.

RESULT

A faint gray light begins to steal over the woods and the fields. The stars all fade out one by one from the sky, and a light breeze springs up, which sets the leaves and the flowers all nodding and whispering to each other.

Put these sentences together:

1. The little birds begin to twitter.
2. They call softly to their friends.
3. Their friends are in the branches above and below.
4. The sun is coming.
5. The sun makes them happy.
6. Perhaps they are telling each other this.
7. The light grows stronger and stronger.
8. Very soon the sun shows its bright rim above the hills.
9. It flings its golden beams over the trees and the houses.

RESULT

The little birds begin to twitter and call softly to their friends in the branches above and below. Perhaps they are telling each other the sun is coming to make them happy.

The light grows stronger and stronger. Very soon the sun shows its bright rim above the hills, and flings its golden beams over the trees and the houses.

Hints for Word Pictures

ONE STORMY WINTER DAY

1. The snow is now falling fast.
2. The wind drives it here.
3. The wind drives it there.
4. The wind drives it up.
5. The wind drives it down.
6. The wind drives it round.
7. The snow and wind frolic merrily.
8. The wind blows fiercely.
9. Here comes a party of boys and girls.
10. They are snugly tucked under warm robes.
11. The bells jingle merrily.
12. The horses toss their heads impatiently.
13. Away they dash.
14. Soon they plunge into a snowbank.
15. Over goes the sleigh.

Write a short story of two or more paragraphs, telling what happened on a stormy, winter day.

Take what you choose from the above.

SPRING

1. Why is the spring like morning?
2. What does spring do?
3. What does it say to the seeds and plants?
4. What does it send down?
5. What does it say?
6. Are they very willing to obey?

RESULT

Spring is like the morning because the sun shines bright and clear.

It takes off the white snow blanket. It says, "Wake up, my dears, I made it nice and warm for you."

It sends down the rain. The rain says, "Rap-a-tap, rap-a-tap, open, open your doors." All are very willing to obey.

THE HOUSE

We may briefly describe a building, such as a house, a church, or a railroad depot, by answering the following questions:—

1. What is it?
2. What is it used for?
3. What are its principal parts?
4. Of what is it built?

RESULT

1. It is a building. 2. It is used for a dwelling-place. 3. Its principal parts are the walls, roofs, rooms, windows, doors, and halls. 4. It is built of wood, brick, or stone.

Combined:—A house is a building which is used for a dwelling-place. It is built of wood, brick, or stone, and its principal parts are the walls, roof, floors, rooms, windows, doors and halls.

THE BIRD AND ITS NEST

1. I see a little bird on her nest.
2. Can you see her?
3. The cat can see her, too.
4. Do not eat the little bird.
5. Can you see the little bird's eggs?
6. No, the eggs are in the nest.
7. Do not fly, little bird.
8. The cat will eat you.
9. Little boy, can you see the bird?

10. The bird cannot see you.
11. Do you like little birds?
12. I like to see the birds fly.

Write a short story of three paragraphs telling about the bird and her nest. Oral, then written.

In the following the answers to the questions of each group will form a paragraph:—

DANDELIONS

1. Of what color are dandelions?
2. When do they blossom?
3. When the snow has melted away, and the green grass springs up, what do we see peeping out everywhere?
4. Where do they grow?
5. Is not every one delighted to see them?
6. Do not children like to gather them?
7. May they pick as many as they please?
8. Why do people not care to preserve them?
9. Are they not so beautiful as many garden flowers?
10. Do you not think God is very good, to make beautiful things so common?

RESULT

Dandelions are bright yellow flowers. They blossom in early spring. After the snow has melted away, you can see them peeping out everywhere.

You can find them in the green grass by the roadside, in the fields, in the yards, and in your own garden. There are so many, you could not count them.

Every one is pleased to see them. Little children like to pick them, because they may take as many as they please. We could not gather them all if we worked all day.

Some people do not like to keep them because they are wild flowers. I think they are as beautiful as some of our garden flowers. They are not so pretty as the rose and the lily.

God is very good to give us so many of these pretty yellow flowers.

RAIN

1. Where does rain come from?
2. How does it get into the clouds?
3. If it were not for rain, would not every thing upon earth die?
4. In summer, do not many weeks often pass away without any?
5. How does everything look then?
6. Does not rain always come at last?
7. Is it not delightful to see the clouds roll up, and the drops begin to fall?
8. Does not the grass begin to grow green again immediately?
9. How does the air feel, and every thing look, after the shower?
10. Do not children always like rain when it does not spoil their plans?

11. If they are planning an excursion, do they like to see the clouds?
12. Do they not always try to think it will not rain?
13. If the rain does come, ought they to complain?
14. Is it not always good for the earth?

RESULT

Rain comes from the clouds. The sun draws the water from the brooks and rivers up into the clouds.

If it were not for rain, everything on the earth would die. In summer, sometimes several weeks pass without rain. Then everything dries up. The grass is scorched and withered. The air is full of dust.

At last a shower comes. The clouds roll up like mountains in the sky, then the drops begin to fall. It is raining.

Soon the streets are full of water, the flowers lift up their heads, the grass is bright again. All at once the sun bursts out. The air feels cool and fresh. Everything looks beautiful after the shower.

Children do not like to see it rain if they want to go some place. When they see the clouds, they are sad. They hope it will not rain. We should not grumble if the rain comes. The rain is good for the earth.

THE ROSE

What is the rose?

What is its color?

On what does it grow?

In what places have you seen the rose growing?

Why do we like the rose?

IRON

Tell us some things that are made of iron.
How does iron feel?
Where do we get iron?
How does it look when taken from the ground?
Where is it put to free it from clay?
Of what use is it?

GOLD

What is the color of gold?
Where is it found?
Tell four things that are made of gold.
Which of these things is the most useful?
What do children like that is made of gold?

THE TABLE

Of what is it made?
Who made it?
How is it fastened together?
Of what are nails made?
Of what is glue made?
How are the boards made smooth. (By planing.)

GLOVES

Of what are gloves made? (leather, cotton, wool,
silk.)
Which are warmest?
Why are gloves used?
What else are used to cover the hands?
How do they differ from gloves?

THE APPLE

What is its shape?
 Tell about the tree on which it grows.
 What color is the apple?
 What is the white part called?
 What is the color of ripe apple seeds?
 For what are apples used?

FROST

1. When does frost first come?
- { 2. Does it not make sad work with the pretty summer flowers?
- { 3. Before it comes, how do they look?
- { 4. After it, is not everything changed?
- { 5. What becomes of the grass and the flowers?
- { 6. Are not the trees the only thing which the frost does not spoil?
- { 7. What does it do to them?
- { 8. Do their bright colors last long?
- { 9. What color do they gradually become?
- { 10. What becomes of the leaves finally?
- { 11. Are not the trees left bare?
- { 12. Do not the cold winds begin to whistle through them then?
- { 13. Is not this a sign that winter is coming?
- { 14. Is it not pleasant, then, to gather round the bright fire in the house?
- { 15. Do not the evenings begin to grow long then?
- { 16. How is it pleasant to spend them?

RESULT

When the nights begin to get chilly in September, we know that Jack Frost is coming. Each night gets colder and colder.

Jack Frost kills the pretty summer flowers. Before he comes everything is pretty. When he passes over the flowers, all are a dull, dead brown.

The grass is chilled, the flowers die. Jack Frost spoils everything but the trees. He paints their leaves red, yellow, and all bright colors. These colors do not last long, soon the leaves turn dark and fall off.

When the trees are bare, the cold November winds whistle through them. We know that winter is near.

It is so cold, we stay in the house. In the long winter evenings, we gather round the fire. We play games, tell stories and crack nuts. We have plenty of fun.

BUTTERFLIES

Do not butterflies seem to be the happiest creatures in the world?

Are they not always out in the sunshine?

Do they not live among flowers?

Are they not gay-looking creatures?

What color is most common among them?

Are they not very delicate creatures?

Are they not of a great variety of colors?

If you touch them with your finger, what happens?

Must it not hurt them?

Do boys like to chase butterflies?

How do they catch them?

Are they ever so cruel as to stick pins through them?

For what do they do this?

Would it not be better to let them live and enjoy their life among the flowers?

MY KITTEN

Have you a kitten?

What is its color?

What kind of disposition has it?

Does it like to be petted?

When you take it up kindly, what will it do?

If you hold it still for a while, will it go to sleep?

How does it fix itself when it goes to sleep?

How long will it sleep?

Is it a frolicsome kitten when it is awake?

What will it do with things it finds on the floor?

Does it sometimes do mischief in its frolics?

Is it old enough to catch mice?

What does it do when it hears a scratching or nibbling sound?

Do you think it will make a good mouser?

RESULT

I have a dear little kitten. Its color is dark gray, all except the tip of its tail and one paw, which are white.

It has a very gentle disposition; and loves dearly to be petted. When you take it up kindly, it begins to purr, and to try to lick your hand with its little rough tongue.

If you hold it still for a while, it will fold its paws, and curl itself up into a round ball, and sleep so for hours, without stirring.

It is a bright, frolicsome little kitten when it is awake, and will cut all sorts of capers with pieces of paper, or anything it finds on the floor, and sometimes it does mischief in these frolics, too.

It is not old enough yet to catch mice; but it will prick up its ears, and look very fierce, when it hears a sound like scratching or nibbling. I think some day it will be a famous mouser.

ICE

1. How is ice formed?
2. Does not water sometimes freeze in falling from the roof?
3. What does it form then?
4. What shape are these icicles?
5. Do we not often see great numbers of them hanging from houses and trees?
6. How do they look when the sun shines upon them?
7. When the weather is very cold, what happens to the ponds and rivers?
8. Do not the boys have merry times then, sledding and skating?
9. Is not ice very slippery?
10. If you do not step carefully, will you not certainly fall?
11. Even then will you not sometimes be over before you know it?

12. Do not children like to find a smooth strip by the roadside?
13. Do they not always stop to try it?
14. And sometimes, by doing so, do they not get late to school?

SNOW

1. What comes next after frost?
2. Are not children always delighted to see the snow when it first comes?
3. Do they not get tired of the dry grass and leaves?
4. Are they not glad to have them covered up?
5. Do they not like to watch the snowflakes as they fall?
6. Do these make any noise in falling?
7. Does it not often snow all night, without any one finding it out?
8. Is it not a great surprise in the morning, to see everything white?
9. How do the trees and roofs look?
10. Is it not pleasant to hear the sleigh-bells jingle?
11. How do boys play with snow?
12. Do they not like it all the better, the deeper it is?
13. Does it not seem strange, that such a cold thing as snow can keep anything warm?
14. Does it not keep the earth warmer than it would be without it?
15. Would not a great many plants die in winter if it were not for the snow?

MICE

1. Are not mice beautiful little creatures?
2. What color fur have they? (dark gray)
3. Is it not soft as velvet?
4. What color are their eyes? (black)
5. Where do they live?
6. Why do people not like to have them in their houses?
7. When do they steal things out of the pantry?
8. What do they like best to eat?
9. Do people sometimes set traps for them?
10. How do they fix the trap?
11. How does the mouse get caught?
12. What else catches mice?
13. How does Puss act when it has caught a mouse?
14. Are not children often afraid of mice, when they hear them in the night?
15. Is it not foolish to be afraid of such little creatures?

"OUR DOG"

1. What kind of a dog is he?
2. Has he a shaggy or a smooth coat?
3. What is his color?
4. What is his name?
5. Why was he so named?
6. Is he an intelligent dog?
7. How does he show that he is?
8. What tricks does he know?

9. What kind of disposition has he?
10. Is he fond of teasing puss?
11. How do they act towards each other?
12. What kind of a bark has he?
13. How does he behave toward strangers?
14. Is he a useful dog?
15. In what way does he make himself useful?

BEES

1. Are not bees more busy creatures than butterflies?
2. What are they doing all the time?
3. Do they ever seem to waste a moment?
4. Do they not often travel a great distance in search of honey?
5. Do they ever get discouraged or lazy?
6. Does it ever happen that a lazy bee gets into a hive?
7. As soon as he is found out, what do the other bees do? (drive him out.)
8. What are these lazy bees called? (drones.)
9. Are they very much hated by the industrious ones?
10. With what do bees line their hive?
11. Did you ever see a honeycomb?
12. What sort of a thing was it?
13. Does it not seem wonderful that such little creatures can make it?
14. How is the honey taken from the hive?
15. What is done with the honeycombs?

BIRDS' NESTS

1. Where do birds generally build their nests?
2. Why do they build them so high?
3. What is the outside of the nest made of?
(sticks and leaves)
4. What is the inside lined with? (soft hair)
5. Where do birds get the materials for their nests?
6. Do they collect it together, and carry it in one load in their claws?
7. How do they manage it?
8. Is not a bird's-nest full of young birds, or of little blue eggs, a pretty sight?
9. Is it not cruel to rob a bird's nest?
10. How does the old bird feel when any one is near her nest?
11. How does she show her distress?
12. Do the birds leave their nests when they fly off to the south or do they take them?
13. Is there any harm in taking them in fall or winter, when the birds have left them?
14. Will they not build other nests when they return in the spring?

RABBITS

1. Are not rabbits pretty creatures for pets?
2. What color is most common among them?
(white, brown, spotted.)
3. What kind of eyes and ears have they? (pink-eyed, black-eyed.)

4. Is not their fur very long and soft?
5. For what is it sometimes used?
6. Can you let them run wild, or must they be kept in a pen?
7. Do they not sometimes try to get out of the pen?
8. How do they do this?
9. Is it not hard work to catch them?
10. What is the best way to do it?
11. What do rabbits eat?
12. Is it not a pretty sight to see them eating?
13. How do they manage it?
14. Are these little creatures of much use except as pets?
15. Do people not sometimes kill and eat them?
16. Does it not seem cruel to kill and eat such pretty creatures?

XVI.

LITERATURE

Endeavor to lead the children to love and read good books. Reading at home should be encouraged.

a. Stories about the children of other lands, their habits, plays, manner of dress, etc., descriptions of different sections of our own country. The above can be obtained from geographical readers. They can be told by the teacher, or read silently by the children.

b. Reproductions, orally, and in writing of legends, fables, stories of the childhood of the saints, of the noble deeds of great and good men and women; stories from his-

tory. History of our American Flag, meaning of our different holidays.

c. *Memory gems*:—Patriotic selections to be committed to memory and recited. A number of suitable poems learned by heart and recited. Religious poems as well as secular.

Friday afternoon recitations or declamations should never be neglected.

Sometimes make a study, from the blackboard, of these poems in respect to their punctuation and capitalization, and meaning. Question the children in such a way as to lead them to see the thought expressed in the poem.

Have the poems copied by the class. Afterwards require some stanzas to be written from memory.

In the following, suggestive questions have been added to each poem; but these are, by no means, all that could be asked. Let each question be one that will make the child *think*, and also *appreciate* the poem.

THE DAFFODILS

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.

Continuous as the stars that shine
And twinkle on the Milky Way,
They stretch in never-ending line
Along the margin of a bay;
Ten thousand saw I at a glance,
Tossing their heads in sprightly dance.

The waves beside them danced; but they
 Outdid the sparkling waves in glee;
 A poet could not but be gay,
 In such a jocund company;
 I gazed and gazed,—but little thought
 What wealth the show to me had brought;

For oft, when on my couch I lie
 In vacant or in pensive mood,
 They flash upon that inward eye
 Which is the bliss of solitude,
 And then my heart with pleasure fills.
 And dances with the daffodils.

QUESTIONS ON THE POEM

- What is a cloud? Where do you see the clouds?
 Why does it say, "*I wandered lonely as a cloud*"?
 What is a vale?
 Give another word for *crowd*, for *golden*.
 What were the daffodils?
 What made the *daffodils* flutter?
 What do you mean by *dancing in the breeze*?
 Did you ever see the Milky Way? Where?
 Where were the rows of daffodils?
 Were there many daffodils? What words tell you?
 How could the daffodils toss their heads? What are
 their heads?
 How do the waves dance?
 Where do the waves sparkle?
 What sentence tells you that the daffodils were brighter
 than the wave?
 What is meant by, "*such a jocund company*"?
 Give another word for *couch*, for *inward eye*.

What words tell you he remembers the daffodils?

When are you in solitude?

Read the lines that tell you the daffodils made him happy.

WHICH LOVED BEST?

"I love you, mother," said little John;
Then, forgetting his work, his cap went on,
And he was off to the garden swing,
Leaving his mother the wood to bring.

"I love you, mother," said rosy Nell,
"I love you better than tongue can tell."
Then she teased and pouted half the day,
Till all rejoiced when she went to play.

"I love you, mother," said little Fan;
"To-day I will help you all I can;
How glad I am that school does not keep!"
She rocked the babe till it fell asleep.

Then stepping softly, she brought the broom,
And swept the floor, and tidied the room;
Busy and happy all day was she,
Helpful and happy as child could be.

"I love you, mother," again they said,—
Three little children going to bed,
How do you suppose that mother guessed
Which of them really loved her best?

ANALYSIS OF POEM

1. *Personages*:—

Who are spoken of in this poem? Give their names. Which child do you like the best?

2. *Time and Place:*—

Where were the mother and her children?

3. *Words and Actions:*—

- a. To whom are the children talking? What did little John say to his mother? What did he then do? Did he really love his mother?
- b. Do you think little Nell loved her mother?
- c. What did little Fan do to show that she loved her mother?
- d. Why was Fan happy? Would you rather be like Nell or Fan? Why?
- e. What did the children say to their mother when they went to bed? Did John, Nell, or Fan love mother best? How could the mother tell?

4. *Result:*—

What does this poem teach you? Which little children should you try to be like? How can you show your mother that you really love her?

5. *Moral:*—

Every little child should show its love for its mother by helping her. Not what we say, but what we do, proves our love for another.
 "Actions speak louder than words."

THE CHILDREN'S HOUR

Between the dark and the daylight,
 When the night is beginning to lower,
 Comes a pause in the day's occupations
 That is known as the Children's Hour.

I hear in the chamber above me
 The patter of little feet,
 The sound of a door that is opened,
 And voices soft and sweet.

From my study I see in the lamplight,
 Descending the broad hall stair,
 Grave Alice, and laughing Allegra,
 And Edith with golden hair.

A whisper, and then a silence;
 Yet I know by their merry eyes,
 They are plotting and planning together
 To take me by surprise.

A sudden rush from the stairway,
 A sudden raid from the hall!
 By three doors left unguarded
 They enter my castle wall!

They climb up into my turret
 O'er the arms and back of my chair;
 If I try to escape, they surround me;
 They seem to be everywhere.

They almost devour me with kisses,
 Their arms about me entwine,
 Till I think of the Bishop of Bingen
 In his Mouse-Tower on the Rhine.

Do you think, O blue-eyed banditti,
 Because you have scaled the wall,
 Such an old mustache as I am
 Is not a match for you all?

I have you fast in my fortress,
 And will not let you depart,
 But put you down into the dungeon
 In the round tower of my heart.

And there will I keep you forever,
 Yes, forever and a day,
 Till the wall shall crumble to ruin,
 And molder in dust away!

QUESTIONS ON THE POEM

What time of day is called the Children's Hour?

What do you call the time of day between the dark
 and the daylight?

What do you mean by a pause in the day's *occupations*?

What does the poet say he hears?

Are they big or little children in the room above? How
 do *you* know?

What do you mean by "my study"?

What word describes Alice?

What word tells that Allegra is a cheerful child?

What is the color of Edith's hair?

How does the poet know they are planning to take him
 by surprise?

What do you mean by "*to take one by surprise*"?

Tell in your own words what is meant by the fifth
 stanza?

What is a turret?

What is the turret meant here?

Who surround his chair?

What does it mean "*If I try to escape*"?

What do you mean by *entwine*?

Who are the *blue-eyed banditti*?

What did they *climb or scale*?
 What is a fortress? A round tower?
 Who were put in dungeons?
 Does the word dungeon here mean a prison?
 What does it mean "put you down into the dungeons in
 the *round tower* of my heart"?
 How long will he keep the children in his heart?
 When will the walls of this tower crumble?

THE GOLDEN KEYS

1. A bunch of golden keys is mine,
To make each day with gladness shine.
2. "Good morning," that's the golden key
That unlocks every day for me.
3. When evening comes, "Good night" I say,
And close the door of each glad day.
4. When at the table, "If you please,"
I'll take from off my bunch of keys.
5. When friends give anything to me,
I'll use the little "Thank you" key.
6. "Excuse me," "Beg your pardon," too,
When by mistake some harm I do.
7. Or if unkindly harm I've given
With "Forgive me," I shall be forgiven.
8. On a golden ring these keys I'll bind,
This is its motto, "Be ye kind."
9. I'll often use each golden key
And then, a child polite I'll be.

QUESTIONS ON THE POEM

Read the poem thoughtfully.

Why are the keys called "golden"?

If you use all the little keys well, how will each day be?

Which key will you take from the ring when going to bed?

When you wish anything at table, which key will you use?

Can you tell me when to use the "Thank you" key?

When, by mistake, I do harm or offend any one, which key will I quickly take from my bunch?

When shall I use the "Forgive me" key?

When did our dear Lord show us how to use this key?

What holds my little keys?

Are you going to let this be your motto, "Be ye kind"?

If so, what kind of a child will you be?

THE CATECHISM OF THE CLOCK

1. Her catechism on her knee,
Her lovely face in study bowed,—
A little maiden sat by me,
And conned her task aloud.
2. Upon the wall above her head
The clock was ticking in the sun;
"How many Gods are there?" she said,
And straight the clock struck One.
3. "How many natures in our Lord?"
Again she asked. "Pray tell me true,
How many natures in the Word?"
The clock responded, "Two!"

4. "But in one God," she softly cried,
 "How many persons may there be?"
 The old clock stared, quite open-eyed,
 And slowly uttered, "Three!"
5. "Well answered!" laughed the little maid;
 "But now the Cardinal Virtues o'er
 I pray you count me." Half afraid,
 The timid clock struck Four.
6. "Dear me! how very clear it sounds!
 But tell me now (with love alive),
 How many are our Lord's chief wounds?"
 The grieving clock sobbed, "Five!"
7. The maiden sighed upon her perch,
 And meekly kissed her crucifix;
 "Pray, name the Precepts of the Church,"
 She said. The clock struck Six.
8. "How many Sacraments, now tell?"
 The clock upraised one hand to heaven;
 With gladness in its silvery bell,
 It sweetly answered, "Seven!"
9. "Upon my word, your funny moods,"
 She said, "astound me. Will you state
 The number of Beatitudes?"
 The ready clock struck Eight!
10. "And now, the Choirs of Angels bright,
 I fain would number at a sign;"
 The clock, amid a blaze of light,
 Triumphant, answered, "Nine!"

11. "Well! I declare, 'tis very odd—
You queer old clock, I'll try again;
The Great Commandments of our God,
Pray tell!" The clock chimed, "Ten!"
12. "The number of Apostles, name,—
When Christ ascended into Heaven!"
With thought of Judas, full of shame,
The clock gasped out "Eleven!"
13. "And now, at last, the Holy Ghost,—
How many are His Fruits, I pray?"
The great clock gave Twelve rapid strokes,
And struck no more that day.

—Eleanor C. Donnelly.

QUESTIONS ON THE POEM

1. What had the little maiden on her knee?
What was she doing?
Which word tells us she repeated her lesson aloud?
Which line in stanza 1 describes the maiden's face?
2. Where was the clock?
Mention one word that tells you it was daytime and
not night.
What question did she ask?
How many did the clock strike?
3. What did the girl ask in the third stanza?
Did the clock answer correctly when it struck "Two"?
4. To what question did the clock answer "Three"?
5. In the fifth stanza, which words tell that the girl was
pleased with the answer of the clock?
How many Cardinal Virtues are there?
Can you name them?

6. What question does the maiden ask in this stanza?
What was the answer?
Tell what is meant by "grieving clock" and "sobbed."
7. What beautiful action did the maiden perform?
What is a crucifix?
Why did she kiss it?
How many Precepts are there?
What does the First Precept command?
8. Why did the clock upraise one hand to heaven?
Write the Roman Numbers that stand for the answer
which the clock gave when asked the number of
Sacraments.
9. Write the words that tell the girl was surprised at the
answers of the clock.
How many "Beatitudes" are there?
Fill the blanks in the following:
Blessed heart, for they
shall
10. By what sign did the clock show that it knew how
many Choirs of Angels there are?
What is the angel called that watches over you?
11. Why was the clock called queer?
How many did it strike when asked about the number
of Commandments?
12. Why did the clock gasp "Eleven" for the number of
Apostles, when our dear Lord had twelve Apostles?
13. Who is it enlightens us in our lessons?
Who is the Holy Ghost?
How many did the clock strike the last time?
Can you tell me why it struck no more that day?

HIAWATHA'S CHILDHOOD

By the shores of Gitche Gumee,
By the shining Big-Sea-Water,
Stood the wigwam of Nokomis,
Daughter of the Moon, Nokomis.
Dark behind it rose the forest,
Rose the black and gloomy pine-trees,
Rose the firs with cones upon them;
Bright before it beat the water,
Beat the clear and sunny water,
Beat the shining Big-Sea-water.

There the wrinkled, old Nokomis
Nursed the little Hiawatha,
Rocked him in his linden cradle,
Bedded soft in moss and rushes,
Safely bound with reindeer sinews;
Stilled his fretful wail by saying,
"Hush! the Naked Bear will hear thee!"
Lulled him into slumber, singing,
"Ewa-yea! my little owlet!
Who is this, that lights the wigwam?
With his great eyes lights the wigwam?
Ewa-yea! my little owlet!"

Many things Nokomis taught him
Of the stars that shine in heaven;
Showed him Ishkoodah, the comet,
Ishkoodah, with fiery tresses;
Showed the Death-Dance of the spirits,
Warriors with their plumes and war-clubs,
Flaring far away to northward
In the frosty nights of Winter;

Showed the broad, white road in heaven,
 Pathway of the ghosts, the shadows,
 Running straight across the heavens,
 Crowded with the ghosts, the shadows.

At the door on summer evenings,
 Sat the little Hiawatha;
 Heard the whispering of the pine-trees,
 Heard the lapping of the water,
 Sounds of music, words of wonder;
 "Minne-wawa!" said the pine-trees;
 "Mudway-aushka!" said the water.
 Saw the fire-fly, Wah-wah-taysee,
 Flitting through the dusk of evening,
 With the twinkle of its candle
 Lighting up the brakes and bushes.
 And he sang the song of children,
 Sang the song Nokomis taught him:
 "Wah-wah-taysee, little fire-fly,
 Little, flitting, white-fire insect,
 Little, dancing, white-fire creature,
 Light me with your little candle,
 Ere upon my bed I lay me,
 Ere in sleep I close my eyelids!"

Saw the moon rise from the water,
 Rippling, rounding from the water,
 Saw the flecks and shadows on it,
 Whispered, "What is that, Nokomis?"
 And the good Nokomis answered:
 "Once a warrior, very angry,
 Seized his grandmother, and threw her
 Up into the sky at midnight;

Right against the moon he threw her;
 'Tis her body that you see there."

Saw the rainbow in the heaven,
 In the eastern sky, the rainbow,
 Whispered, "What is that, Nokomis?"
 And the good Nokomis answered:
 " 'Tis the heaven of flowers you see there:
 All the wild-flowers of the forest,
 All the lilies of the prairie,
 When on earth they fade and perish,
 Blossom in that heaven above us."

When he heard the owls at midnight,
 Hooting, laughing, in the forest,
 "What is that?" he cried in terror.
 "What is that?" he said, "Nokomis?"
 And the good Nokomis answered:
 "That is but the owl and owlet,
 Talking in their native language,
 Talking, scolding, at each other."

Then the little Hiawatha
 Learned of every bird its language,
 Learned their names and all their secrets,
 How they built their nests in Summer,
 Where they hid themselves in Winter,
 Talked with them whene'er he met them,
 Called them "Hiawatha's Chickens".

Of all beasts he learned the language,
 Learned their names and all their secrets,
 How the beavers built their lodges,
 Where the squirrels hid their acorns,

How the reindeer ran so swiftly,
 Why the rabbit was so timid,
 Talked with them whene'er he met them,
 Called them "Hiawatha's Brothers".

QUESTIONS ON THE POEM

- Who was Hiawatha?
- What is the name of the poem?
- What does it tell you?
- Give another word for wigwams.
- Who live in wigwams?
- Draw a wigwam.
- Who was Nokomis?
- What was in back of the wigwam?
- Why does it say *rose the black and gloomy pine-trees*?
- What were on the fir trees?
- Draw a cone.
- What was in front or before the wigwam?
- How do you know Nokomis was old?
- Was she kind to Hiawatha?
- What was his cradle made of?
- What did Nokomis say to Hiawatha to make him stop crying?
- What did she say as she rocked him to sleep?
- Tell some things the old Nokomis taught the little boy.
- What was the broad white road in heaven? (Milky Way)
- Where did Hiawatha sit on summer evenings?
- What did the pine-trees whisper?
- What did the water say as it lapped against the shore?
- What was the name of the fire-fly?
- What do you call the fire-fly?
- When is *the dusk of evening*?

Tell me what these lines mean:

*"With the twinkle of his candle
Lighting up the brakes and bushes."*

What song did Nokomis teach Hiawatha?

Read the song. Repeat it.

What did he see rise from the water?

What did he ask Nokomis?

What did she answer?

Give another word for *warrior*.

Where did he see the *rainbow*?

When can you see the rainbow?

What did Nokomis tell him the rainbow was?

Where did she say the wild flowers and lilies go when they fade?

Was Hiawatha afraid of the owls? What words tell you this?

What did Nokomis say the owl and owlet were doing?

Tell some things Hiawatha learned.

What did Hiawatha call the birds?

What did he learn about the beaver? What is a lodge?

What did the squirrels hide?

What did the reindeer do?

What did he learn about the rabbit?

What did Hiawatha call the beasts?

Why does the first word of each line begin with a capital?

Why has Nokomis a capital?

Why has Hiawatha a capital?

Why has Hush a capital in "Hush! the naked bear, etc."?

Teach these *poems* in parts. The *answers* to the *questions* are found in the *poems*.

ELLA'S HAT

Ella's father owns a pretty little house near the sea. When the city grows hot and dusty, Ella's family go to the sea-side. Once when Ella had just come to this summer home, she ran upstairs for her old shade hat. She found two little squirrels cuddled up in it. The mother squirrel had made a nest there with some cotton from Ella's quilt. They looked so cunning and happy that Ella ran away quietly so as not to frighten them.

Difficult words—

pretty	squirrels	family	frighten
upstairs	dusty	cunning	cotton
grows	cuddled	sea-side	quietly

QUESTIONS

- What has Ella's father?
- What did the family do?
- When did they go?
- What did Ella do when she got to the summer home?
- What did she find in her hat?
- What had the mother squirrel done?
- What did she use for it?
- How did the squirrels look in their nest?
- What did Ella do, not to frighten the little squirrels?

LITTLE DICK'S CAT

Little Dick was very poor. Both his father and mother died when he was a little baby. Dick had no one to take care of him. So he had to work for his living. He slept alone in a garret. There were holes in the floor and in the walls. Every night the rats would come out of these holes, and run around in the garret. Dick did not like the rats. One day he cleaned a man's shoes. The man

gave Dick a penny. The next day Dick saw a little girl carrying a cat in her arms. "I'll give you a penny for the cat," he said. The girl took the penny, and Dick carried the cat to his garret. Kitty was a good mouser and she caught so many rats that the rest did not dare to come to the garret any more. Dick and kitty were good friends. Dick often saved part of his dinner for her.

Words of the Lesson—

living,	caught	penny	carrying
mouser	cleaned	carried	dinner
garret	saved		

QUESTIONS

Was Dick a rich boy? What happened when he was a little baby?

Had he any one to take care of him?

What did he have to do for a living?

Where did he sleep?

Tell something about the floor in the garret.

What happened every night?

Did Dick like the rats?

Who gave Dick a penny, and why?

What was kitty and what did she do?

Who were good friends?

What did Dick often do?

THE STORY OF COLUMBUS

This good man was born in a far country called the Sunny Land of Italy. His parents were poor and worked hard.

Columbus loved the sea, and spent much of his time on the ships helping the sailors.

He would often listen to wonderful stories about the sea, and in this way learned much about sailing.

When at school he studied arithmetic, drawing and geography.

He went to sea when he was fourteen years old and his first voyage was to the East Indies.

At that time people thought that the earth was flat but Columbus was sure that the earth is round and said he could reach India by sailing westward.

Columbus wished to prove this by making a voyage to India but he was too poor.

He asked the king for money, but he refused. After a while he begged the queen for some, and she helped him to prepare three ships.

On August 3, 1492, after hearing Mass and receiving Holy Communion, Columbus and about ninety men set sail from Spain.

For many weeks they could not see any land, and wished to return home. But Columbus would not give up, and in three days more they saw land. When they reached land they knelt down, and thanked God for His care and protection.

They met strange looking men with straight hair and red skin. Columbus called them Indians.

This place where Columbus landed is called San Salvador (Holy Savior).

He died without knowing he had discovered this beautiful country of ours.

ST. ROSE OF LIMA

St. Rose was born in Lima, a city of Peru. She was baptized Isabella. One day her mother saw a beautiful

rose touch her face and then her mother changed her name to Rose.

Whilst very small, she would often look at a picture of our Lord crowned with thorns. From this she learned to suffer for love of Him.

She loved to pray, and in her sleep would say, "May Jesus be with me: Blessed be Jesus."

When she was a child she loved to go to the little summer house that her brother had built for her. She would often call the insects to help her sing to God.

St. Rose loved St. Catherine of Sienna and tried to be like her. She would not even wear rich clothes for fear of offending God.

Our little saint worked hard every day to help her family. She was able to sew beautifully.

In all her troubles, St. Rose went to Our Blessed Lady. She loved to kneel before a statue of Our Lady with the Holy Child.

St. Rose entered the Order of St. Dominic, and lived a saintly life.

HERMAN JOSEPH

There is a beautiful story told of a good and kind little boy who had a great love for the Blessed Mother.

He attended school; but every morning on his way had to pass a church where he loved to spend a few minutes before the altar of Our Lady to beg her to help him in his daily studies.

His parents were very poor and often he had to go to school bare-footed. This was very hard, but little Herman bore it all for our dear Lord without complaint.

One cold morning, a kind lady met Herman on his way to school and gave him an apple. He was delighted and

would have liked to eat it, but thought to himself, "No, I will give it to the Infant Jesus in Mary's arms, in church".

He stepped up to Our Lady's shrine and said aloud, "My dear Mother, see what a nice apple I have, please take it and give it to the Infant Jesus for I am a poor, little boy, and have nothing else to offer you."

The statue of the Virgin reached out its arm and took the apple from the good little boy, and wonderful to say spoke to him, saying, "Dear little Herman, why are you so poorly clad, your clothes so worn? You have no shoes on your feet, you must be cold."

Then little Herman loved the Blessed Mary still more, and told her how poor his dear parents were, and that they had no bread to eat.

The Blessed Virgin then told him most kindly, that she could help his poor parents, and calling him, told him to raise a stone that was lying near his feet. He did as Mary bade him and how surprised he was when he found a piece of money lying there. He picked it up.

Now, good little children never keep any money without permission. Herman held it up to Mary, who said, "Take it home to your parents that they may buy bread and clothing. When your parents need more, come again." Little Herman ran home as fast as he could and brought it to his mother. She was delighted to receive the wonderful gift from our Blessed Lady.

His parents were very happy to have so good a little son. He always proved obedient, and therefore God's blessing was with him at all times.

PICTURES

1. Children should be taught to see things represented in the picture in their relation to each other.

2. Direct their attention to some central figure in the picture, and group all the others around it.
3. Names may be given to the boys and girls represented. Let them invent a story suggested by the picture.
4. Place on the board questions which when answered will form a complete story.
5. Draw an outline picture on the board. Place questions below it; also suggestive words, and have the pupils tell the story.

THE VISION OF ST. ANTHONY

While preaching in Arcella, he stayed at the house of a friend, as there was no convent there. A quiet room was given him so that he would not be disturbed in his prayers.

One evening the gentleman, his friend, saw rays of light streaming from the door; he went to the room and peeped through the opening of the door, for it was ajar; there he saw the Saint holding a beautiful Child whose little arms were thrown round Anthony's neck in sweet embrace.

The man was charmed with the vision, and, while he was wondering how the Child had come in, and what Child it could be, It raised Its finger, pointed to the door, and disappeared. Anthony went to the door, and, seeing his friend, begged him by the love of the Infant Jesus not to speak of what he had seen to any one.

The man promised he would not, and not till after the death of the Saint did he speak of it, then he published it far and wide.

THE VIRGIN AND THE CHILD

In a beautiful grove, all surrounded by bushes and trees, there was a marble statue of the Blessed Mother and Child on a shrine.

A good little boy loved to play at this spot, and his mother would always go with him, and tell him how our Lord was once a little boy like him, and how He now rules over us all, and takes care of us as a good father, and sees all that we do, and knows what we say.

One day the little boy went, as usual, to this spot, and thinking over all his dear mother had told him, spoke thus to the Infant Jesus: "O, beautiful Child Jesus, come down and play with me. I will give you the prettiest flowers, and make a crown of ripe red strawberries for you, if you will only come down and play with me." Then seeing that the Infant Child did not come down, he looked at the statue of the Blessed Mother, and said, "O holy, holy Mother, put our dear Lord off your knee, and let Him come, for here, in these meadows, there is no one to play with me."

His mother, on the way home, was thinking over the words of her little boy, and that same night had a lovely dream. She saw the Infant Jesus playing with her boy, and heard the Divine Child promise rich and many blessings to him for all his love and prayers in the grove.

The good and anxious mother awoke, and never stopped thinking of her beautiful dream.

In about a month and a day the little boy was dying, and in loving words told her he saw the sweet Child Jesus coming to take him, carrying in his divine hands sweet flowers and rich and juicy strawberries.

After he told this to his good mother, he died, saying: "Dear Mother, let me go!" There was great and deep sadness over the little boy's death; but the loving mother did not grieve much, for she knew her darling child was with Jesus.

Word Study

1. Give and require lists of articles in the schoolroom, in different kinds of stores, articles of clothing, articles made of particular substances, the parts of articles, the kinds, etc. This increases the child's vocabulary, and will at the same time be an excellent drill in nouns. The different words can be used in sentences for oral and written work.

Things seen on a dining-table—

table-cloth	napkins	spoons
forks	glasses	casters

In a room may be seen—

the ceiling	the walls or partitions	
the mantel-piece	doors	windows

In the schoolroom may be seen—

desks	benches	chairs	blackboard
maps	charts	a globe	pointers
erasers	chalk	pictures	books
slates	pens	pencils	rulers

In a bakery, we find—

bread	rolls	biscuits	cookies
cakes	pies		

In a garden, you would find—

flowers	grotto	fruit	shrubs
fountain	trees	ponds	urns
vegetables	statues	grass	walks

In a grocery store, we find—

fruits	coffee	crackers	pickles
teas	dried fruit	canned fruit	
vegetables	vinegar	spices	

Some articles of clothing are—

dresses	waists	skirts	coats
shoes	stockings	slippers	laces
shawls	ribbons	bonnets	hats
gloves	mittens	leggings	caps

Parts of a door—

rails	panels	hinges	latch
lock	stiles		

Parts of an apple—

peel	core	eye	meat
pulp	seeds	juices	veins
seed-cases	dimples	stem	

Parts of a tree—

trunk	branches	limbs	roots
rootlets	bark	sap	heart
knots	forks	fruit	buds
blossoms	leaves	shoots	

Parts of a pin—

head	breast	point	shaft
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The parts of a shoe—

sole	strings	eyelets	heel
upper	pegs	nails	insole
instep	tongue	lining	buttons
tip	welt	binding	seam
shank	toe		

The parts of a chair—

front	seat	legs	balls
back	posts	rungs	

The parts of a clock—

face	wheel	spindle	key
dial	weight	axle	chain
hands	cogs	pendulum	wire
bell	hammer	frame	case

Parts of a lead pencil—

wood	head	grade	number
lead	point		

Parts of a cup—

bowl	handle	rim	edges
bottom	outside	inside	

Parts of scissors—

blade	limbs	bows	point
edges	back	shaft	rivets

Parts of a window—

sash	frame	glass	panes
putty	tins	pulleys	cords
strips	catch	weights	guard

Parts of a bell—

mouth	clapper	border	rim
edge	cup	handle	nut
tongue	hammer		

Parts of a hat—

brim	band	lining	trimming
crown	binding		

Parts of a broom—

handle	wire	tacking	twine
broom	sewing		

Parts of a cent—

head	image	name	stamp
wreath	date		

Parts of a knife—

handle	blade	edge	heel
spring	joint	sides	point
maker's name	frame	plate	notch
rivets	grooves	back	

Here add the *drill* for articulation and marking of phonics.

The following shows what the different articles are made of:—

<i>Jewelry</i>	<i>Buttons</i>	<i>Money</i>	<i>Bread</i>
gold	horn	copper	flour
silver	pearl	nickel	yeast
amber	bone	silver	water
coral	stone	gold	salt
diamonds	wood	paper	alum
<i>Coats</i>	<i>Dresses</i>	<i>Plaster</i>	<i>Houses</i>
cloths	cotton	lime	stone
cassimere	wool	water	brick
skins	linen	sand	boards
furs	silk	hair	plank
linen		gypsum	joist
<i>Knives</i>	<i>Combs</i>	<i>Books</i>	<i>Paper</i>
steel	horn	paper	straw
wood	bone	wire	rags
bone	rubber	thread	barks
iron	celluloid	muslin	jute
silver	ivory	leather	hemp

II. Teach the Contractions: I'm, you're, he's, isn't, aren't, can't; explain their formation.

Show we omit a letter and in its place use the ('), and then write the two words as one word.

I am—drop the *a*, and we have I'm.

you are—drop the *a*, and we have you're.

he is—drop the *i*, and we have he's.

is not—drop the *o*, and we have isn't.

are not—drop the *o*, and we have aren't.

can not—drop the *n* and *o*, and we have can't.

NOTE:—Tell the children that the shortened form should not be used in good composition work. Their main use is in conversation, and in writing what another has said.

Elementary Science

I.

The Sun

SUGGESTIVE QUESTIONS

1. { What is the sun? (Size)
 { Where is it? (Distance from the earth)
2. Who made it? When?
3. Of what use is it to man?
4. { When do we see it?
 { When do we not see it? Why?
 { Where is the sun on cloudy or rainy days?
5. { What do we call its appearance in the morning?
 { What do we call its disappearance in the evening?
6. When the sun disappears (goes away) from our view,
 do any other people see it?

RESULTS

The sun is an immense burning ball in the sky. It is very, very large, more than a million times larger than the earth on which you live. You know we call eight squares a mile, now the sun is 92 million times that distance away from our earth.

This wonderful ball of fire was created by God on the fourth day of Creation.

We owe the daylight to the sun. It also gives us heat, and makes our earth beautiful. Without the sun, we could not live. Our earth would become cold and damp, nothing would grow, and in a short time, everything and everybody would die.

We can see the sun in the day time. On cloudy or rainy days and at night, we cannot see the sun. The sun is there on a cloudy day, but he is hidden behind the clouds, so you cannot see him. Sometimes you can catch him peeping through the clouds when they separate.

In the morning when the sun comes up, we say it is *sunrise*. His going down in the evening we call *sunset*. When the sun is directly over our heads, or nearly so, we say it is *noon*.

When the sun has gone down in the West, then we have *night*; but the little children and people in the countries on the other side of the earth see the sun. When we are saying our night prayers, some of those children are saying their morning prayers.

Would it not be well when we are saying our prayers to thank God for giving us the beautiful, useful sun?

•NOTE:—The above will give the teacher an idea of the questions that may be asked during the lessons, and the answers that must be drawn out. A few sentences could be written on the slates for *busy work* after the oral lesson.

Sentences for Busy Work

1. The sun is in the sky.
2. It is a big burning ball.
3. It is very far away from the earth.
4. God created the sun.
5. The sun gives us daylight.
6. It makes us warm.
7. We could not live without the sun.
8. Everything would die if the sun did not shine.
9. At night, we cannot see the sun.
10. Children in other lands see him then.
11. On a cloudy day we cannot see him. He is behind the clouds.
12. I love to see the sun rise in the morning.

II. The Effect of Heat and Cold

It is so pleasant this morning, we will put on our "thinking caps" and take a walk.

You want to know what became of the pool of water that was here yesterday? Who thinks he knows? No, John, it did not all sink into the earth. Frank is right, much of it went into the air.

Water that lies open passes into the air in particles so fine that we cannot see them. This is called vapor, and hence we say the water evaporated.

The warmer the air, the more vapor or *moisture it will hold*. If the air slowly becomes cold, we can see the moisture. Water in this form has another name. Can any one tell me what we call those things which look like large white mountains floating along in the sky? Yes, we call them *clouds*. Now these clouds are moisture. When the clouds are near the earth, we say it is foggy. You know

what fog is like. How many can remember a foggy morning? Tell me what it was like.

Now when these clouds become cold, they can no longer hold their moisture. Then a big drop of water falls on you. You look up and say, "It is raining."

In winter the clouds become colder and as the water leaves the clouds, the drops freeze to one another and form beautiful crystals or shapes. Then we say, "It is snowing." But if it is too cold, it will not snow.

John, did you ever notice the snowflakes that fell on your coat when it was snowing? Yes, they were all very pretty. Each one was different. How many points did they all have? Did no one ever notice? Well, they all have six points. Try to notice this the next time it snows.

Of what use is snow? It makes a nice warm blanket for the ground. The farmer is glad for the snow. It will keep his wheat warm.

Sometimes as the rain comes down, it passes through very cold air. Then the drops freeze to one another and form lumps of ice. Sometimes these lumps of ice are so large that they break panes of glass. What do we call these lumps of ice? (Hail.)

There is another form of water which you would miss very much, especially if you like to skate. I knew you would say it is ice.

Who can tell me why the ocean does not freeze? Mary thinks it is because the water is salty and because it has waves, and she is right.

If the water in a bottle were frozen, what would you notice? If the bottle is cracked and the ice comes over the top of the bottle, what does this show? (Water takes up more room, or expands, when it becomes ice.)

Sometimes, when a farmer does not care to cut a stone for a doorstep which he thinks he will need the next year, he drills holes in the rock where he wants it to split. During the winter the water collects in the holes and then freezes. The ice then expands and splits the stone.

If we were to take a walk early on a summer morn, what would we find on the grass? (Or, you could ask, if you run through the field early on a summer morning, what would you notice had happened to your shoes? What made them wet?) Yes, we call these drops of water *dew*. Can you tell me where this dew comes from or how it is formed? Well, I shall now tell you.

Supposing that on a very hot day you left a glass of ice-water stand on the table for a while, what would soon form on the outside of the glass? If you ever touched the glass on the outside, what would you notice? Did this water on the outside of the glass come from the inside? Who can tell me? The ice in the glass made the glass colder than the air in the room. And when the warm air of the room touched the cold glass, it was chilled and left some of its moisture on the glass. Now this dampness or moisture on the glass we might call dew, for it is formed as dew is formed.

During the night the plants and the ground become cold and the warm air striking them is chilled and leaves its moisture on the stones or plants. Some objects become colder than others. Plants and flowers become colder than the fences and such things, hence they have more dew. Now who can tell me how dew is formed?

But some cold morning you come out and instead of the dew, you notice a pretty, white, shining substance sparkling on the grass and fences. Sometimes you see it on the window panes when you get up. Who knows what

it is called? "Jack Frost". Yes, but sometimes we say frost, or hoarfrost. Jack Frost can paint very pretty pictures. (Let them recite the poem called "Jack Frost.")

There is yet another form of water that we know about. Did you ever hear the cover on the tea kettle rattle, and see the big puffs coming out of the spout? Now what makes the kettle act thus? You say the boiling water does it? Yes, but it is more correct to say the steam formed by the water does it. You cannot see steam until it meets the air. The white cloud coming out of the nozzle of the kettle is steam that on coming to the air has turned to vapor or fog. You see this when your mamma is cooking dinner, and all the pots are "steaming" you say. If you look at the window panes of the room then, you see they are dim because they are covered with a mist, a thin layer of steam, a little cloud, as it were. Sometimes you write your name on the window when it is that way. In a little while the moisture comes together forming little drops which roll down the pane. This is like drops of rain.

But let us come back to the steam. You see how strong, or powerful it is. It can lift up the lid of the kettle. A little boy sitting by the fireside had noticed this quite often, and thinking much about it he decided that steam might be made to move things. Years afterward steam was used in making engines run. You have perhaps watched the piston rod of the engine as it moves back and forth, pushed by the steam. Perhaps you have heard the sharp, shrill whistle at the mill, or on the steamboat and when you asked what was going on, some one said, "They are letting off *steam*." Then you watched the white cloud of vapor mount into the air and form clouds. But remember the steam you cannot see, you notice it only after it

has been changed into vapor (Let children tell the different uses of steam.)

Now review carefully, drawing from the children the different forms of water about which you have talked to them. These were *vapor, clouds, fog, rain, snow, hail, dew, frost, ice, and steam.*

III. Effects of Heat and Cold on the Soil

Cold causes the ground to freeze. But if the ground is covered with snow, the snow will keep the ground from being frozen.

Heat will melt this snow; and change it all to water again.

Heat causes the ground to thaw out again, if it is frozen.

This alternate freezing and thawing of the ground or soil causes the soil to disintegrate; that is, to break more and more apart.

Cold and heat acting on stone, or rock, cause it to break into particles. This adds to the soil and enriches it.

The leaves of the plants that die in the autumn, fall. They decay and become a part of the earth. The roots suck up from it sap to be made into new shapes again.

IV. Effects of Heat and Cold on Animal Life

COLD

God has made the covering of each animal suit the climate in which He places it. If it is in a warm country, it has a light covering; if in a cold country, it has a very heavy, fur covering.

Cold affects some animals in such a way as to cause them to take a very long sleep. The blood, in some, stops circulating (bat). The animal ceases to breathe.

Other animals crawl into winter quarters, but their blood moves a little, and once in a while, they take a breath. When the weather warms, they wake up enough to eat a little. They have laid up something alongside of them for this purpose (field-mouse).

We may say the cold makes many animals sleep.

The cold causes the birds to fly away to warmer climates.

HEAT

The warmth of spring wakes up again the life in these animals. It causes the blood to begin to circulate anew in them. They come out from their hiding places, and multitudes of animals are around again.

The earth swarms with the busy insects, and birds, and creeping things, of which none are seen during the winter.

Heat causes the egg to change into the chicken.

V. Effects of Heat and Cold on Plant Life

COLD

The cold causes some plants to die entirely, and others to go to sleep for the winter.

The sap ceases flowing in some, they die off entirely.

Some sleep. Take the tree. Jack Frost snaps off the leaves. It goes to sleep. The sap is still in the pipes, but it is not flowing. The mouths in the roots have stopped working, or drawing nourishment from the ground.

The buds all over the tree are asleep in their winter cradles. They are covered up snugly in their winter coats.

Other plants die down to the ground killed by the cold, but their roots live through the winter. The life in the roots is asleep, their little mouths do not drink up any sap. Snow protects the plants and keeps them from freezing.

HEAT

As soon as spring comes, the heat goes through the coats of the buds, warms them, the buds begin to swell. They open their coats and begin to make leaves and buds and flowers.

The sap begins to flow again through the stem. The little roots again draw up moisture from the soil. Life in the plant goes on; in a few days the tree is covered again with leaves.

Heat awakens all nature. Too much heat without any moisture will dry up the grass and the plants.

CONVERSATIONAL LESSONS ON ANIMALS

NOTES—The following outlines are to give the teacher the most important points relating to each animal. Pictures and drawings of the animals should be brought to the class; the pupils should observe these and discover as many characteristics as possible for themselves. What they cannot learn by observation should be supplied by the teacher. It is advisable to let the children have access to books about the different animals.

Each oral lesson should be completed by a written lesson.

Questions can be placed on the board, or the *topics* of the outline could be written on the board and the pupils be required to write what they remember under each topic. Illustrations for this grade are in the Drawing Book.

THE LION

I. RECOGNITION AND NAME—The Lion, the King of Beasts.

II. COLOR—Tawny, or yellowish color corresponding to the desert tracts in which he lives, and aiding his concealment in stealing upon his prey.

III. CHARACTERISTIC PARTS—

1. *Head*—Head is very large. Head and neck of the male are covered with a long, thick mane.
2. *Eyes*—Bright and flashing, the lion being able to see as well by night as by day.
3. *Ears*—Small.
4. *Tongue*—Is covered with almost horny points, directed backward. These are so large and strong that a smart stroke of the tongue would strip off the skin from a man's hand. It is useful to him in separating the meat from the bones of his victims.
5. *Teeth*—Formed for tearing, seizing and cutting flesh, similar to cat's teeth.
6. *Whiskers*—Very sensitive organs of touch, as wide as his body, so he may feel his way in passing through narrow places.
7. *Body*—Covered with a smooth, even coat of hair, and is light and graceful in form; it is very muscular, active and powerful. Eight feet from nose to tail.
8. *Tail*—Long, ending in a tuft of hair. At the extremity of the lion's tail there is a small hook or claw, fastened only to the skin, and in some instances it falls off. When angry, the lion lashes his sides with his tail. He breaks branches with his tail.

9. *Legs*—Fore legs are thicker than those of any other animal of his tribe, and show his great power; while the hind legs are not so heavy and aid him in springing and leaping.
10. *Paws*—Very powerful; claws are sharp and can be drawn into the soft, cushion-like paws to enable him to steal noiselessly upon his prey.

IV. MOVEMENTS—Very stealthy and cat-like.

- #### V. FOOD AND FEEDING HABITS—Feeds on wild and domestic animals, and, if very hungry, on human flesh.
- Different species of deer and antelopes are his chief food, but he often feasts on a stray horse or cow.

He springs upon his prey, strikes it with his powerful paws, in a word, he treats his prey exactly as a cat does a mouse, sometimes playing with it for a while and then tearing it to pieces.

The stomach of the lion is well fitted for the kind of food he eats.

His intestines are very short, his food being so much like his own flesh it does not need much digestion to transform it into bone, blood, and muscle for himself.

VI. NAME AND CARE OF YOUNG—

The young lion is called a cub. It is a very playful little creature and may easily be tamed. The mane and tuft at the end of the tail are not fully developed until he is six or seven years old. The baby-lions are carefully watched, and courageously defended by both parents, the lioness

being very ferocious if any one comes near her cubs.

VII. HOME—

The home of the lion is principally in Africa and Asia. It most frequently inhabits open plains in which the shelter of occasional bushes or thickets may be found.

VIII. CHARACTERISTICS—

The roar of the lion is extremely grand and peculiarly striking, and when heard at night fills one with terror.

The lion may be well termed the "King of Beasts". He carries his head high, and walks with a slowness which may well pass for gravity.

His visage is calm and dignified, and his bushy and magnificent mane gives him an air of grandeur that commands awe.

Lions are not courageous, they sleep in the daytime and lie in wait for their prey at night.

The lion is very tender to his mate and helps to look for food for the little cubs.

COMPARISON OF CAT WITH LION

1. The lion has many characteristics of the cat, in fact he is one of the cat family. He has teeth, tongue, eyes, claws and whiskers like a cat. He steals upon his prey, crouches, springs, and leaps like the cat, plays with his victim as the cat does with his mouse. Even the cubs resemble the kittens in their playfulness.

2. The lion, however, is much larger, stronger and fiercer than a cat, and has the mane, and tuft of hair on his tail which the cat has not.

THE TIGER

I. RECOGNITION AND NAME—Tiger.

II. COLOR—Striped with black on a ground of yellow fur which is almost white on under part of body.

III. SPECIAL CHARACTERISTICS—

1. *Form*—Long body, resting on short legs.

Length a little more than 8 ft.

Height 3 to 4 ft.

In size equal to lion, but has no mane.

2. *Head*—Naked, smaller and rounder than the lion's.

3. *Eyes*—Rolling.

4. *Tongue*—Scarlet.

5. It must have free access to water.

6. Seeks its prey by night.

IV. CHARACTERISTIC MOVEMENTS—

Attacks men with bold and daring ferocity.

Tigers can be tamed.

Conceals itself near some spot to which its victims come. With terrific roar, it springs on the animals and stuns them with its weight. Can leap an immense distance.

V. CAPTURE—

Captured in pitfalls at bottom of which is a bamboo stake sharpened into a point.

Captured by hunters armed with rifles, in a sort of carriage on the back of elephants.

VI. CARE OF YOUNG—

Cub is cared for by female tiger; she will fight valiantly to defend her young.

VII. ADAPTATION TO LIFE—

Stripes on back of skin assimilates so with long, jungle grass among which it lives, it is impossible to distinguish the tiger from the tall grass in which it rests.

VIII. HOME—

1. Native of Asia.
2. Bamboo jungles or banks of pools and rivers; loves swampy ground.
3. Peacock and monkey tell the presence of the tiger in the jungle.

THE BEAR

I. RECOGNITION AND NAME—

Bear.

II. COLOR—

Polar Bear—White.

Grizzly Bear—Black, brown, and black and brown.

III. SPECIAL CHARACTERISTICS—

1. *Head*—Small. Forehead is convex. Face is long. Mouth is pointed. Some heads long and flat between the ears.
2. *Muzzle*—Long and pointed. Some of light gray color, others brown.
3. *Eyes*—Pupils are circular.
4. *Teeth*—Six cutting teeth above, and six below; one canine tooth on each side in each jaw, with four false molars and two molars on each side above, and four false and three molars below. The false molars are soon lost in the

more carnivorous species. Teeth are adapted to cutting, chewing, and tearing, hence the bear is an omnivorous animal.

5. *Body*—Very heavy and clumsy, and is covered with a coat of thick, shaggy hair.
6. *Tail*—Very short and in some species it is hidden under the fur, and then the animal appears to be tailless.
7. *Legs*—Thick-set, and the fore and hind legs are almost the same length, thus unfitting the bear for swift running or leaping.
8. *Paws*—Very strong and powerful. Each paw is fitted with five separate, curved, sharp claws. Claws are not retractile.

The entire sole of the foot touches the ground in walking, hence the bear is called a plantigrade animal.

The feet of the Polar bear are covered with hair to enable him to walk on the ice; other bears have not this hair on their feet.

IV. MOVEMENTS—

Slow and clumsy, but can climb very well. Some species, when pursued, can climb and travel very swiftly. He can swim.

V. FOOD AND FEEDING HABITS—

The bear feeds on roots, acorns, nuts, berries, succulent vegetables, honey, and even insects, thus proving that he is more a herbivorous than a carnivorous animal. If he is very hungry, he will occasionally raid a farmer's pig-sty, or carry off a kid or lamb. Tame bears are very fond of bread. Polar bears feed on seals.

VI. NAME AND CARE OF YOUNG—

A young bear is known as a cub. Bears are born blind, and remain so for about four weeks. A young bear is easily tamed and is as harmless and playful as a puppy. The mother bears exhibit great attachment to their mates and young.

VII. HOME—

Bears are found in nearly every part of the globe excepting Africa and Australia. They generally live in forests and make their homes in a hollow tree or cave.

VIII. ADAPTATION AND LIFE—

Their teeth and digestive organs suit to vegetable food. Claws are adapted for digging in the earth and for climbing, rather than for seizing prey.

Bear's mode of attack is to rear upon its back feet, seize its victim between its fore legs, either to suffocate it with its embrace or disembowel it with its hind claws.

IX. SPECIAL POINTS—

The bear hibernates. During the summer months he becomes very fat, laying a store, as it were, for the winter. He curls himself up in a hollow tree or cave and sleeps for about two months. The blood circulates very slowly and he is kept alive from his store of fat. Bears have a habit of sucking their paws for hours at a time with a peculiar grunting noise.

In capturing prey, the bear takes it in his powerful fore paws and hugs it to death. He often

walks on his hind paws, and when tamed may easily be taught to dance. He robs bee-hives to obtain the honey. The Polar bear is the largest member of its family, and feeds on seals, fish and walruses which it pursues in the water, swimming and diving with great skill.

X. USES—

1. *Skin*—Is used for making fur-cloaks, coverlets, caps, rugs.
2. *Flesh*—Is used as food.
3. *Fat*—(bear's grease) is in great demand as an unguent for the hair.
4. *Intestines*—Are used in Kamtschatka, instead of glass, for windows.
5. *Skin*—Is used in making leather for harnesses, etc.

THE FOX

I. RECOGNITION AND NAME—Fox.

II. **COLOR**—Common fox, reddish-brown body, breast white, legs and ears marked with black.

III. CHARACTERISTIC PARTS—

1. *Head*—Roundish.
2. *Muzzle*—Very pointed.
3. *Mouth*—Very wide, for fox kills its prey. Spare beard on upper lip.
4. *Ears*—Short triangular ears, wide at the base so it can catch faintest sound. Outside is black, in common fox.
5. *Teeth*—Very sharp; calculated for a mixed diet.
6. *Eyes*—Very expressive; at times showing malice. Grayish-green. Foxes are nocturnal

animals, therefore pupils contract vertically in the form of a slit.

7. *Body*—Low in stature in proportion to length of body.
8. *Tail*—Very bushy; end usually white. It has a gland under the tail which secretes a very fetid substance communicating to the animal its well-known smell.
9. *Legs*—Very slender; in common fox, black.

IV. COVERING—

Thick, shaggy hair. Skin drawn very tightly over muzzle and forehead.

V. CHARACTERISTIC MOVEMENTS—

Runs, springs, bounds, creeps, crouches. All movements are very sly. When going in search of prey always goes in a slanting direction, and drags tail on the ground. Circles round and round its prey, gradually approaching, crouches, then springs at throat of prey. If caught in trap, will often gnaw its leg off to free itself.

VI. SOUNDS—

Snaps, barks, yelps, howls when in pain, makes many noises.

VII. HOME—

Caves, hollow trees; also digs burrows. Some varieties make 3 and 4 galleries in a burrow. Hunters often dig or smoke foxes out of burrows.

VIII. FOOD—

Small animals; hares, chickens, ducks, etc. Grapes, and honey of which it is very fond.

IX. YOUNG—

Are called cubs. Old fox loves cubs very much; will attack any one to save them.

X. USES—

Fur is made into articles of clothing.

XI. KINDS—

COMMON FOX—Reddish-brown.

BLACK FOX—Coal black with its tail tipped white; fur is very valuable.

SILVER FOX—White tipped with black. In summer it becomes bluish or yellowish. The fur of this fox is six times more valuable than any other fur found in North America.

XII. EXTRA FACTS—

The fox belongs to the dog family. It is distinguished from wolves, jackals, etc., by the pupils of the eyes. In the fox, they contract vertically and in the form of a section of a lense, not circularly.

THE RABBIT

I. RECOGNITION AND NAME—The Rabbit.

II. COLOR—

Wild are usually some state of brown. White, gray, black, spotted.

III. CHARACTERISTIC PARTS—

1. *Head*—Long and tapers towards snout.
2. *Eyes*—Protected by two eyelids with stiff lashes and also by an opaque membrane. Pink in color. Never entirely closed even in sleep. Can see in front and behind.

3. *Ears*—Far back. Long upward and backward; pointed, to enable it to catch the faintest sound as its only means of defense is flight. It is constantly moving.
4. *Nose*—Slits near the point of the snout.
5. *Mouth*—Elongated. Long, stiff hairs or whiskers on side of mouth.
6. *Lips*—Soft and mobile and upper one is cleft.
7. *Teeth*—First, or milk teeth, are soon lost and are replaced by permanent ones. These grow through life as they are worn away at the top. They are imbedded in sockets in the jaws. The rabbit is a gnawing animal and has teeth suited to it. In front of each jaw are two incisors which are chisel-like, having enamel only in front. This causes them to wear so as to keep a sharp cutting edge. The upper jaw has another pair of very small and sharp incisors which are placed a little back from the edge of the jaw just outside of the first pair. The canine teeth are wanting in both jaws, but the molars or grinders number 6 pair above, and 5 below. The jaws move backward and forward.
8. *Body*—Symmetrical.
9. *Tail*—Very short; merely a stump.
10. *Legs*—Hind legs are longer than fore legs. Some species have long legs, others shorter, same as ears.
11. *Feet*—Cushioned with hair.

IV. COVERING—

Covered with short hair.

V. SOUNDS—

A peculiar and shrill sound.

VI. FOOD—

Wholly vegetable. Bark of trees and young plants; very fond of cabbage leaves, celery tops, carrot tops and dandelion.

VII. HOME—

Called a burrow as rabbits live in communities, burrows all connect, but each rabbit has its own nest.

Hares makes a bed of grass called a form.

VIII. YOUNG—

Able to care for themselves at an early age. Rabbits are blind at birth.

IX. CHARACTERISTIC—

Likes a dry soil, never makes burrow in a wet place.

X. MOVEMENTS—

Runs or leaps very rapidly; squats, bounds, sits on its haunches. It squats close to ground when any one approaches, in hope of not being noticed. When on the watch, it sits on its haunches with one foot before the other.

Ears slanted and pointed in opposite directions. The ears are so long that when the rabbit hoists them to listen better he is often seen. When quiet, sits with legs folded under, and ears down and back. All rabbits are very timid.

XI. USES—

Flesh is used as food. Fur is made up to imitate more valuable furs. Hair is taken from skin and is used to make felt for hats, etc. The bare skin is then sold to glue-makers to make glues.

XII. ADAPTATION AND LIFE—

Teeth suited to food. Seeks protection by burrowing. Able to skip from place to place rapidly.

XIII. EXTRA FACTS—

The rabbit is of the same family as the hare, but with shorter limbs, and it is shorter in size. Rabbits live in communities and burrow their homes, while hares form beds of grass which are called "forms" and the hare lives alone. The so-called rabbits of America are in reality hares. Hares depend on their speed for safety while rabbits seek their burrows, therefore hares are better runners. Rabbits injure young trees.

THE RAT

I. RECOGNITION AND NAME—

Rat. (Rodent, or gnawing animal).

II. COLOR—

Some black, some a rusty brown.

III. SPECIAL CHARACTERISTICS—

1. *Head*—Pointed.
2. *Upper Lip*—Divided.
3. *Nose*—Pointed.
4. *Ear*—Naked.

5. *Teeth*—Two chisel-like teeth in front of each jaw.
 - a. *Inner* part of ivory.
 - b. *Outside* of glass-like enamel, very hard.
 - c. Upper teeth work exactly into the under in the act of gnawing, so that the soft part is continually worn away, hard part keeps its chisel-edge.
 - d. Teeth grow from the point, so they are continually renewed. If one tooth be removed or fall out, the opposite tooth will grow till it projects from the mouth and ceases to be of any use.
6. *Body*—Long.
7. *Tail*—Naked, long and smooth. It is prehensile, can be used as a hand or a balance.
8. *Legs*—*Slender*.
9. *Toes*—
 - a. Four on hind feet.
 - b. Four on front feet, with sort of wart like a thumb. Long claws.
10. If pressed by hunger, rats eat their young.
11. He is a most cleanly animal in his personal habits.

IV. HOME—

Hollow spaces in walls. He burrows in drains and out-of-the-way holes and crevices.

V. FOOD—

Vegetable and animal food. Cheese, corn, biscuits, garbage, the crops of the farmer.

VI. USE—

He is a scavenger of drains; eats up everything that might cause sickness.

VII. CRY—

He squeals.

THE MUSK RAT

1. *Tail*—His tail is vertically flattened.
2. Lives on river banks and in water. His home is in reeds, one entrance above, and another below the surface of the water.

THE PORCUPINE

I. RECOGNITION AND NAME—Porcupine.

II. COLOR—Gray.

III. CHARACTERISTIC PARTS—

1. *Head*—Muzzle, broad and blunt, covered with very short hair.
2. *Ears*—Short and rounded.
3. *Teeth*—Incisors smooth and large; 2 above, and 2 below. Molars, 8 above, and 8 below.
4. *Body*—Heavy and pig-like; 2 to 3 ft. in length.
5. *Tail*—About six inches, covered with quills.
6. *Legs*—Short, fore legs have four toes and thumb. Hind feet have five toes, covered with short hair.

IV. COVERING—

The skin is very tightly drawn over the body; this causes the quills to stand erect when the porcupine rolls up.

Muzzle and limbs are covered with short hair. Back, sides, and tail are covered with quills which are longest on the middle of the back, where they are the thickness of a goose-quill and about a foot long. They end in a sharp point and are ringed with black and white which gives the animal a gray color.

Ordinary position is flat on body with points directed backward; but when angry, the porcupine causes them to stand erect and point in every direction. The quills on tail are about two inches long and rattle when the body is shaken. Its quills make a rushing noise when the animal walks.

V. FOOD—

Feeds on nuts, bark, fruits, and vegetables; sometimes commits great destruction in gardens.

VI. HOME—

A burrow in the ground which it digs. America, Africa, some parts of Europe, and Asia.

VII. CHARACTERISTIC MOVEMENTS—

Becomes torpid in winter. Lives alone. Seeks its food by night. When attacked rolls itself in a ball, thus the quills stand erect and enter the one who touches it. The quills penetrate deeper and deeper. The porcupine cannot throw the quills as some writers claim, sometimes the quills stick in the objects and becomes detached.

VIII. USES—

Flesh is used for food. The Indians used the quills to ornament their dress. They still have a certain commercial value.

IX. EXTRA FACTS—

Porcupine belongs to the family of gnawers. Name is derived from words *porc*, a hog; *epin*, a spine. It has a grunting voice.

THE WHALE

I. RECOGNITION AND NAME—Whale.

II. COLOR—

Upper parts black; the lower parts white.

III. CHARACTERISTIC PARTS—

1. *Skin*—Naked with exception of a few bristles about the jaws.
2. *Head*—Occupies $\frac{1}{3}$ to $\frac{1}{4}$ of the whole length.
3. *Eyes*—Situated on the sides of the head about a foot above or rather behind the angles of the mouth. Sense of sight very acute in the water.
4. *Sperm Whale*—Teeth in lower jaw.
Right Whale—No teeth.
5. *Tail*—Extremely powerful. It is placed transversely, and not vertically as in fish.

IV. MOVEMENTS—

It balances itself with its flippers.

It progresses by vertical movements of its horizontal tail.

Spouting or blowing delicate fountains of spray from their so-called nostrils or blow-holes on the top of their heads.

These blow-holes have valves to keep out the water.

It swims very rapidly.

A single blow of the tail is sufficient to destroy a boat.

V. ADAPTATION TO LIFE—

1. They possess warm blood, hence are not fishes, though fish-like in form. They must rise at intervals from the water to breathe the air.
2. A whale can remain below water more than half an hour because it has a vast collection of blood-vessels filled with purified blood.
3. It has no fins. Its flippers are fore legs furnished with a kind of hand covered with a thick skin.
4. Mouth is suited to taking small food.
5. Layer of fat in Greenland whale gives buoyancy to the whale and protects it from the cold of the icy waters.

VI. YOUNG—

Called cub or calf. Whale shows great attachment to its young and on approach of danger seizes it with its flipper and carries it out of the way. The mother often floats upon the rolling waves, holding one flipper over the back of her calf.

VII. HOME—

In the ocean, especially in the cold seas.

VIII. FOOD AND FEEDING HABITS—

1. Whale has no teeth, its throat is very small. The tongue is a soft, thick mass.
2. It eats jelly-fish, mollusks and other small animals.

3. While feeding, it swims through these shoals with its mouth wide open. Water passes in the mouth and out at side leaving the tiny animals entrapped in the whalebone fringes. When many are thus collected, they are swallowed from time to time.

IX. KINDS—

GREENLAND WHALE—Called the right whale.

1. *Blubber*—From which oil is obtained, is a layer of fat connected with the skin, covering animal to depth of 2 feet.
2. *Whalebone*—Grows in broad plates, which hang from the roof of the mouth. Sometimes 300 side by side. *Outer* edge is smooth and unbroken; *inner* toward the middle of mouth is fringed with frayed out whalebone fibres. The brush-like ends make an excellent strainer for collecting food.

SPERM WHALE.

1. These live in great schools.
2. Have large, square heads, single blow-hole near ends of snout.
3. No whalebone plates, but lower jaw has large, conical teeth, slightly curved.
4. These give Spermaceti, a fatty semi-fluid substance, which hardens as it cools. Head is occupied by a cavity containing this; other cavities of the body are filled with it.
5. Ambergris is a waxy substance found in the intestines of the whale, also at times floating masses are washed on shore.

THE DOLPHIN

I. RECOGNITION AND NAME—Dolphin.

II. COLOR—Dark.

III. STRIKING CHARACTERISTICS—

Smaller than true whales. They are very playful. It has a long snout, is elegant in form, has long dorsal fins. Both jaws are furnished with numerous equal teeth.

IV. MOVEMENTS—

They caper playfully in the water. They follow a vessel in large companies, often leaping out of the water frolicking and tumbling about under her very bows. They chase their prey.

V. FOOD AND FEEDING HABITS—

Small fishes. They will pursue schools of small fishes and follow them into bays and even up rivers.

VI. ADAPTATION TO LIFE—

Has long extended jaws armed with from forty to forty-seven conical teeth. Teeth in both jaws.

Outline for *Horse* is found in First Grade Book.

COMPARISON OF HORSE AND ZEBRA

1. The *Horse* is found in nearly all parts of the world. The *Zebra's* home is in southern Africa.

2. *Both* have beauty of form and color. The *zebra* has regular stripes of brownish black silky covering on its whole body, even down to the hoofs. It has very slender limbs.

3. The *Horse* is domesticated and lives near the homes of man. The *Zebra* lives in troops among mountains and in the grassy plains, shunning the abode of man. One animal is appointed as sentinel to warn them of danger. Wild nature of *zebra* never submits to taming influence. He is restless, wild and suspicious.

4. Sight of *Zebra* is long and quick.

5. *Both* possess many characters in common.

OXEN

I. RECOGNITION AND NAME—Oxen.

II. COLOR—Various.

III. STRIKING CHARACTERISTICS—

1. *Head*—Flat forehead is longer than broad.
2. *Horns*—Smooth, round, and tapering. Horns curve outward and downward.
3. *Toes*—Of each foot are connected under what is called a cloven hoof, as if a solid hoof had been cleft in two.
4. *Hoof*—Broad.
5. *Tail*—Short.
6. He is very patient and useful.
7. Not so strong as horse and slower.

IV. MOVEMENTS—

Rather slow and plodding.

V. FOOD AND FEEDING HABITS—

It is a hollow-horned cud-chewer. Grains, oats, grass, etc.

VI. YOUNG—

Young ox called calf. Its flesh is veal, its feet are used for jelly, its stomach salted and dried is called rennet.

VII. HOME—

America, Europe, Africa and Asia where it is domesticated. Wild ox is found in Africa, Asia, and Europe. Lives, where possible, in herds.

VIII. ADAPTATION TO LIFE—

Horns for defense. Stomach arranged for chewing cud. Strong body for work. Defend themselves with their horns.

IX. USES—

1. To draw wagons and plows.
2. Flesh, called beef, is eaten.
3. Skin is used for soles of shoes.
4. Fat made into candles.
5. Hoofs made into glue.
6. Hair is mixed with mortar.
7. Horns made into combs and knife-handles.
8. Bones used as a substitute for ivory.
9. Bones ground to powder.

THE DEER

I. RECOGNITION AND NAME—Deer.

II. COLOR—

Light brown in summer, reddish grey in winter, under part of tail and throat is always white.

III. MOVEMENTS—

Springs, leaps, very difficult to capture.

IV. CHARACTERISTICS—

1. *Smooth, close, hairy coat.* On breast of male deer, hair grows long and is called a beard. Small head, proudly erect. Long neck.
2. *Eyes*—Large, clear, bright, full of gentle earnestness, furnished on inner corner with a curious hollow, or gland, called the tear-pit.
3. *Ears*—Small, pointed.
4. *Antlers*—Are full of air-cells and porous, hence not so heavy. In some species only the male wear antlers. In *reindeer* both male and female have huge horny antlers. They *shed* their antlers every year, and renew again with increase of size and number of branches.
5. Whole animal noted for beauty of form.
6. *Size*—Various, from the large elk, or moose; the small roe deer, the size of a sheep; and the pigmy, the size of a hare.
7. *Tails*—Short.
8. *Legs*—Slim, slender.
9. *Disposition*—Amiable and very timid; but old males sometimes fight and they defend themselves against the hunter with hoofs and horns.

The deer is cloven-footed. It has two toes encased in hoofs which look like one hoof split in two parts. It has also two smaller toes at the back of the foot which seldom touch the ground, but are encased in dainty little hoofs.

V. HOME—

Over the entire world except Australia and South Africa. They live in herds. If alarm is given by one in herd, all go away.

VI. Food—

Vegetable—In cold climates they feed on lichens and scanty fare. They feed in herds.

VII. CARE OF YOUNG—

Mother is a vigilant and tender parent to the young fawn. She is always on the alert when feeding and hurries the little ones off at the first sign of danger.

VIII. ADAPTATION TO LIFE—

The whole animal is built for lightness in running, its limbs are slim, its horns light, its hoofs suited to running.

Sense of sight, smell, and hearing perfect to warn them of danger. They are cud-chewers and this manner of feeding is suited to timid animals; it is to their advantage to be able to swallow their food rapidly and run away to some shady, secluded spot.

IX. USE—

Flesh of deer is called venison.

THE REINDEER

1. Furnishes wealth to people of cold countries.

Is domesticated.

2. Serves instead of horse, sheep and cow.

3. *Flesh* and milk are used for food.

4. *Skin* furnishes clothing and bedding.

5. *Used* to pull sledges over the snow.

6. *Hoofs* divided high—so that when animal places foot on ground, hoofs spread wide; when it raises hoof, parts close together, making scraping noise.

THE MUSK DEER

Musk Deer of Central Asia has musk in pouch. This is formed from blood of animal, like any other secretion.

COW AND DEER COMPARED

SIMILARITY

Both are cud-chewers. They feed on vegetable substances, of which they consume large quantities, and it is their custom to swallow their food hastily without chewing and then afterwards to raise it into their mouths and chew it thoroughly at their leisure. They can do this because their stomach is divided into four parts.

In the first stomach, the food is moistened with juices. Then it goes to a chamber where it is made into little balls and returns to the mouth to be chewed. Then it is swallowed and passes through the other two chambers or stomachs.

Both have no incisors on the upper jaw, and the grass is drawn into the mouth with their long tongues and bitten off against the hard upper gum.

Both have cloven hoofs.

DIFFERENCES

Cows have hollow horns, which grow around a bony core which is part of the skeleton of the cow. They are never shed. They last during a lifetime.

Deer have large horns called antlers. Only the males have them. They are not like ordinary horns, they are solid and branching in form.

Regularly at the end of each year, they fall off and are replaced by new ones.

Cows have heavy hoofs. *Deer* have light hoofs. *Cows* are adapted to slow, heavy walking; *deer* are adapted to springing, and swift movements.

THE RHINOCEROS

I. RECOGNITION AND NAME—Rhinoceros.

II. COLOR—

African—black.

Asiatic—white.

III. STRIKING CHARACTERISTICS—

1. Bare, smooth hide, thick, leathery skin. Coarse bristles at tail and upper end of ears.
Head large, muzzle prolonged.
2. Short legs. Small tail terminated by small tuft.
3. Three toes on each foot, encased in hoof.
4. Long and erect ears.
5. Very small eyes.
6. Horn on front of snout. This is not joined to bone of head but to the skin. It can be detached by cutting around its base.
7. Organ of sense very acute. Can scent from a great distance.
8. Disposition surly and ill-tempered; savage when irritated. Given to homesickness and despair if confined in cage, etc. Moans loud, dashes its head against wall of prison.

IV. MOVEMENTS—

Roots up river plants with its horn.

Uses horn as weapon of war.

Spends hours rolling in the mud, or wading in water.

Grasps herbage on which it feeds, also picks up small fruit from the ground with its flexible lip.

V. FOOD AND FEEDING HABITS—

Roots dug up with horn, also grasses and river plants.

VI. HOME—

Asia and Africa. Lives solitary or in pairs or little companies. Never in large herds.

VII. ADAPTATION TO LIFE—

Is an aquatic animal, leathery skin allows water to flow off easily. Short legs to bear heavy body.

Horn is weapon of defence and offence. Roots up bushes and small trees, fruit and foliage with this horn.

VIII. USES—

Horns used for ramrods, clubs; and when highly polished, for drinking-cups.

Hide is proof against claws of lion and tiger and cannot be penetrated by leaden bullet except in thinner parts around neck and chest. Must be shot with bullets of tin and iron.

IX. KINDS—

African:

a. Two horns.

b. Smooth skin.

Asiatic:

a. One horn.

b. Rough skin, hanging in folds like a mantle.

THE TAPIR

I. RECOGNITION AND NAME—

Tapir (link connecting elephant and hog).

II. COLOR—

Black or uniform deep brown. Malay Tapir is grayish-white in hinder parts.

III. STRIKING CHARACTERISTICS—

1. As large as a donkey, and very powerful.
2. Has a very thick hide, hair short.
3. Neck is thick.
4. Tail is small.
5. Ears are short.
6. Eyes are small.
7. Muzzle is lengthened.
8. It sleeps in the day, and comes out at night.
9. Fond of water, remains below water a long time.
10. Disposition is gentle, can be easily tamed.
11. When annoyed defends itself with its teeth.
12. Snout is lengthened into a proboscis like that of the elephant, but shorter, and without the finger-like appendage.

IV. MOVEMENTS—

Uses its formidable teeth for defense. Can swim and dive into water to save itself from the jaguar. Bores through tangled brushwood with its wedge-shaped head which is covered with hard skin.

V. FOOD AND FEEDING HABITS—

Watermelons, gourds and vegetables, grapes, herbage, young shoots of trees which it seizes with its snout.

VI. YOUNG—

These are beautifully marked with yellowish fawn-colored stripes and spots.

VII. HOME—

South America—In the brushwood and deep recesses of forests.

VIII. ADAPTATION TO LIFE—

Suited for swimming and its wedge-like head and thick skin adapted to getting through the brushwood where its home is.

IX. USES—Hide and flesh.

THE ELEPHANT

I. RECOGNITION AND NAME—Elephant.

II. COLOR—

Ash-gray in common ones. White ones extremely scarce and held in high esteem by the Eastern sovereigns. Sometimes a reddish color.

III. CHARACTERISTIC PARTS—

1. *Head*—Is very heavy. Skull composed of number of cells of bone, only small cavity for brain.

Asiatic—Concave forehead; small ears; enamel of teeth arranged in transverse bands.

African—Convex forehead; enormous ears; enamel of teeth lozenge shaped.

2. *Neck*—Very short.

3. *Eyes*—Very small, but sensible and lively.

4. *Teeth*—There are the two upper incisors prolonged. They serve for defence, and for plow-

ing the ground to obtain roots for food. None on lower jaw. No canine teeth. Molars large and transversely ridged, few in number.

5. *Tusks*—Eight feet long and often weighing 100 pounds.

6. *Nose and Trunk*—Nose lengthened into a trunk or proboscis. It is really a thick, fleshy, flexible snout, and contains 4000 muscles, which permit every conceivable motion. It is highly sensitive. Trunk ends in a finger-like point below which are the nostrils. This point is delicate enough to enable the elephant to pick up a grain of wheat.

The trunk helps the elephant to reach food; it could not do this with its mouth on account of its short neck and huge tusks. Water drawn into trunk by suction, through two openings; then end is inserted into mouth and contents discharged down throat. Trumpet-like voice is produced through the trunk.

When the elephant wishes to wash himself he fills his trunk with water, then blows it out with great force over his body.

7. Quick sense of hearing. It has an exquisite smell; sometimes selects flowers with its trunk and smells them with great eagerness.

8. *Body*—Largest living quadruped, attains height of 8 to 10 ft.; and 10,000 lbs. in weight.

9. *Legs*—Almost wholly free from body, somewhat short and thick.

10. *Feet*—Usually five-toed, but toes are represented externally only by five broad, shallow hoofs. Feet are supported by thick, broad

pads. (Asiatic has one more hoof on each foot.)

The metacarpal bones are shortened so that the heel is brought near the ground, the elephant walks on its toes.

IV. COVERING—

A thick, naked skin. Extinct mammoths are covered sparsely with long hairs.

V. FOOD—

Herbage, roots, leaves, tender branches of trees. Sometimes tears up large trees and feeds on the juicy roots.

VI. HABITS—

Live in herds of 20 or more, and sometimes attain the age of 100 years. The elephant has been known from the earliest ages. Delights in submerging itself in water.

VII. DISPOSITION—

In captivity, docile and gentle. Can be provoked to anger. Long-lived.

VIII. USES—

Tusks and teeth furnish ivory.

THE SLOTH

I. RECOGNITION AND NAME—Sloth.

II. COLOR—

Dull like bark and moss. Coarse shaggy hair of a very peculiar texture like grass withered.

III. STRIKING CHARACTERISTICS—

Moves suspended from branch to branch. Sleeps suspended from branch.

Tail is short.

Muzzle is short.

Cry is low and plaintive.

Its chief enemy is the snake.

IV. MOVEMENTS—

Moves rapidly from branch to branch by means of his long and powerful arms furnished with strong curved claws. In walking, he steps on the side of the foot, sole being turned toward body.

V. ADAPTATION TO LIFE—

He hangs suspended from the branches, back downwards, by his claws which hook around the branches. If trees are far apart, he devours all the foliage of the tree before he leaves it to climb another.

His color is so like that of bark, he is well protected. He can barely shuffle along on ground because of his claws and difference in length of fore and hind limbs.

VI. FOOD AND FEEDING HABITS—

Leaves of trees. He clings with the short hind legs, and draws in other boughs with his long fore legs to strip off the leaves for food.

VII. HOME—

In forests.

THE ARMADILLO

I. RECOGNITION AND NAME—

Armadillo (burrowing animal.)

II. COLOR—Dark.

III. STRIKING CHARACTERISTICS—

1. Scaly armor composed of agglutinated hairs, middle divided into bands to give freedom of motion; or we can say of hard bony plates united at edges.
2. Tail protected by rings.
3. Legs by horny knobs.
4. Muzzle pointed—ears long.
5. Can be forced from burrow by smoke or water.

IV. MOVEMENTS—

Burrows with great rapidity to escape capture. Rolls itself up into a ball trusting to armor to protect. Head and tail are closely tucked away in a hole where the two ends of the shell meet.

Dig with their strong claws.

V. FOOD AND FEEDING HABITS—

Carrion, especially the bodies of dead buffaloes, insects, fallen fruits.

VI. HOME—

Warmer parts of America.

VII. ADAPTATION TO LIFE—

Scaly armor for protection.

Plate on head, one on shoulders, one on hinder part of body and movable plates between to help it to walk.

Tongue, smooth and slender and leaving a sticky saliva to help it to capture ants and other insects.

VIII. USE—

Roasted in shells for natives and colonists.

Flowering Plants

NOTE:—In all the work on plants, after the oral lessons, place appropriate questions on the board and require the pupils to answer them in *their own words* in writing.

Sometimes it is well to place a topical outline on the board, and let them tell all they know under each point.

Again, let them draw the leaf, or flower, etc., studied, and write a description of it. It is always well to teach children to illustrate their compositions.

In taking up this work on *plants*, you should always refer to the uses of the parts of the plant to the plant. The following table will help you to keep these uses in mind:

USES OF THE PARTS OF A PLANT TO A PLANT

Root—Holds the plant in its place and draws juices from the ground to nourish it.

Stalk, or Trunk—Supports the branches, leaves, fruit, and flowers, also carries sap to the different parts of a plant.

Bud—Begins the leaf or flower.

Leaf—Lungs of the plant, breathes for the plant; absorbs moisture, as dew or rain; gives shade to the flower and fruit.

Flower—To make seeds.

Fruit—To hold, nourish, and protect the seeds.

Seeds—To produce new plants.

Sap—To nourish the plant, make it grow, keep it alive.

HYDRANGEA

Examine plant and flower if possible.

1. Flowers pink, sometimes blue, are in clusters.
2. The leaves are whorled.
3. It needs lots of water.

Use—Mainly for beauty.

COREOPSIS

Examine specimens as before.

This flower belongs to the same family as the sunflower.

Its flowers are compound, being composed of many flowers.

The flowers around the outside edge are shaped like a strap.

The flowers in the centre are shaped like a tube. Their use is for beauty.

GLADIOLUS (Corn-Flag)

Specimen to be examined by class

Each flower has a green cup, but its colored part has six divisions, three making an upper lip, three more spreading. There are many flowers in a cluster, yellow, orange, or reddish.

JAMESTOWN WEED

Examine specimens.

Note the large leaf, the white tube-shaped almost funnel-shaped flower.

Use—Flowers for decoration.

Oil for perfumery is obtained from the flowers.

The bees and butterflies enter this flower, gather the yellow dust (pollen) that is inside. As they come out

loaded with dust, they scatter it just where the flower needs it. This dust will ripen the seeds of the Jamestown Weed.

The seed-vessel is covered with sharp little sword-like points. When the seed-vessel is ripe, it splits open, and shows us the little black seeds inside.

DAHLIA

Examine plant and flower; let children tell the color of the dahlias they have seen. Speak of the tuberous root of the plant, show one or draw one; tell that these roots are taken up in winter because they cannot stand the frost.

Use to Man—For beauty and decorations.

Dahlia roots are used as food in Mexico. Most people consider that they have a nauseous taste.

CHICKWEED

PREPARATION—Specimen or pictures of same. Common weed of gardens.

Let the children examine the specimen and tell its parts, color, odor, and the uses of the parts of the plant to it.

Stems are always curiously marked with a line of hairs.

Leaves close up on the young shoots at night, or we say *sleep at night*.

Uses to Man—It is used in place of spinach and greens; also in making poultices, and for feeding cage-birds. Here both leaves and seeds are used.

WILD CARROT

Examine the specimen or picture as suggested under *Chickweed*. Note also the following:—

The wild carrot root is slender, woody and of a very strong flavor.

If a root or the upper portion of one be put in water, it will throw young leaves that will adorn a room in winter.

Ladies at one time used carrot leaves as an ornament instead of feathers.

Use—Boiled carrots are used for poultices, a sirup is prepared from carrots.

TUBEROSE

Study the specimen as before. Note that the flower is shaped like a funnel and is pure white.

The flowers have a very strong odor, which gives some people a headache.

Fading flowers sometimes give out electric light and sparks.

Fruits

QUINCE

PREPARATION—Specimen, pictures and colored drawings.

Color—Rich yellow, or orange color.

Odor—Strong.

Shape—Pear-shaped, or globose.

Taste—Hard and austere; when stewed with sugar, extremely pleasant.

Parts—Skin, pulp, seeds. There are many seeds.

Use—As a food. For a beverage like cider. Seeds give out mucilage to water.

The outlines for the *plum* and *pear* are in the First Grade Book.

PUMPKIN

PREPARATION—Specimen, pictures, or colored drawings.

Shape—Round like globe, or pear-shaped.

Size—From that of an apple to 50 or 70 lbs.

Home—Cultivated in fields and gardens over the whole world, except where the climate is too cold for it.

Use—As an article of food for man, also with shoots of plant for feeding cattle.

CRANBERRIES

PREPARATION—Specimens if possible.

Plant—An evergreen shrub.

Flower—Shaped like a wheel.

Fruit—A fleshy fruit called berry.

Taste—Acid.

Color—Bright red berry.

Home—In bogs, and marshy grounds, and in high places where the soil is sandy, or in a garden around the margin of a pond.

Gathering—By means of a rake. American cranberries are larger than those of Europe, and are exported to Europe.

NUTS

PREPARATION—Different kinds of nuts.

METHOD—In the First Grade, we studied the peach. You all remember the fleshy part that we ate and the stone within. Today, we shall speak of fruits that have no such fleshy part. These are called *dry fruits*.

Here is one. Who knows what it is? Yes, it is an *acorn*. And this? (A chestnut.) This? (A *cocoanut*.) This? (A hazelnut). All these are dry fruits, and they are a special kind called a *nut*. What are all these? (*Nuts*.)

Let us examine the *acorn*. Lead the pupils to see the hard bony wall, the one seed inside, the little *cup* at the base of the acorn. (Refer to lessons on acorn. First Grade)

Next take the *chestnut*. Lead them to see that this *cup* becomes a *burr*.

In the *hazelnut*, the cup is a leafy husk, or covering. Lead them to see that a *nut* does not of itself split open, and give up its seed. The cup, burr, or leafy husk may fall off, but the nut itself does not open.

STONE FRUITS

PREPARATION—Have a few cherries, plums and peaches.

Examine each of these to let the pupils see the *outer*, *fleshy* layer which is soft and sweet and eaten, and the *innermost* layer, or the *stone*.

Tell them fruits like these are called stone fruits.

Remember the *stone* is not the seed, it contains the seed.

SEED-PODS

PREPARATION—Pods of pea, maple, poppy and snapdragon.

METHOD—Let the pupils examine the *pea pod*, and see how it splits into two parts called valves. Have them note the arrangement of the seeds in the pod.

Take the winged fruit of the *maple*, called a pair of keys. It is like a nut with a wing.

If possible get the seed-pod or *capsule* of *poppy* and *snapdragon*, so that the pupils can notice the way in which it opens to give up its seeds.

Draw attention to the difference between these and the nuts.

These pods open of themselves, and give up their seeds, the nuts do not.

Take any seed-pods of familiar plants. All these pods are *dry fruits*.

DISPERSAL OF SEED

Read this subject in the *First Grade Book*. Enlarge on it, have specimens brought to class.

The *milkweed* seed with its little balloon and top of silk; the *chestnut burr* opening to give up its seeds; the *dry pods* opening to let their *seeds* drop and be carried away by the birds or sink into the soil; the *dandelion* with its *seeds* that the wind will blow away; *tick* with the *seeds* that stick to our clothes and so on. Thus *seeds* are carried from one place to another, and the production of plants is spread.

BUDS

I. Bring, or have brought to class, buds of the cherry, European walnut, snowball, lady's mantle and oxalis. If you cannot secure specimens of these, take any that the pupils can bring or you can obtain.

Some buds are scaly. They belong to trees and shrubs of countries in which growth is stopped during the winter. This scaly covering protects the young parts beneath, shielding the tender leaves not only from cold, but from the effect of sudden changes from heat to cold. The *Snowball* has these noticeable scaly buds.

Large and strong buds like those of horse-chestnut contain small leaves, or pairs of leaves, ready formed, folded, and packed away in a small space.

Early spring leaves are from buds that have lived over winter in their scaly-covering. Some buds have quite a sticky substance around their outside.

Read up the subject in *First Grade Book*.

II. Bring leaf-buds of familiar plants to class. Let pupils bring specimens.

METHOD—Have some of each kind opened to see the way in which the leaves are folded in the buds.

They will find the following:—

1. Some leaves lie *flat* in the bud, or the upper part bent upon the lower. (Tulip-tree.)

2. Some are *rolled* from apex to base (ferns); others from one side to the other in a coil (apricot, plum); others again from each side inward toward the midvein (violet, water-lily); and another kind from each side outward toward the midvein (Rosemary, azalea).

3. Other leaves are found folded in half along the midvein (magnolia, cherry, oak); others folded like a fan (maple, currant).

4. A kind of compound leaves is found with one leaf overlapping the other (Horse-chestnut).

In the absence of natural specimens illustrating these points, it would be best for the teacher to cut different shaped leaves out of paper, and then show the different kinds of arrangement as here mentioned.

Take others of the buds that were brought and place them in water. Lead the pupils to take pleasure in watching them, from day to day, to notice the way in which the bud bursts its covering, and the leaf unfolds itself from its position in the bud.

If there are any plants to which the children can have access to watch the buds unfold, let them do so. Lead the pupils to watch those at home and tell what they have noticed.

III. Have flower-buds of different familiar plants brought to class. Place them in water. Let the pupils

watch the flower unfold. Require them to tell you what they notice in each case.

Let them tell you of the opening of flower-buds in their gardens at home. Do not forget to notice those in which leaf and flower come from the one bud.

Read the explanation given under *Buds* in First Grade Book.

SEEDS AND GERMINATION

Study the lima bean, the pea, and the squash, discovering something of the order, or plan of growth, also how they burst their coats. Read up this subject in the First Grade Book. Note in the bean, pea, and squash the following:—

1. The outside *skin*.
2. The little *plantlet* in the seed.
3. The two *seed-leaves* or *cotyledons*, full of white nourishment (albumen) for the young plant. The *radicle*, little stem of the leaves, or beginning of the root of the new plant. In other words, the part that will grow and go down into the soil as a root, and form new roots for the plant, and draw in food from the ground to make the young plant grow.

Watch the growth.

4. The seed imbibes some moisture through its coats, swells a little, and as it feels the warmth, the embryo (radicle and cotyledons) begins to stretch itself out. The tiny stem gets longer, its end bursts through the skin of the seed; the two seed-leaves grow larger, straighten out, throw off the seed-coats, or skin. Now the seed-leaves spread out, and

you see the seedling plantlet. (Refer to drawings of bean and pea in drawing book, First Grade.)

The seed-leaves are full of nourishment (the sweet part of the bean or pea that is eaten).

The little radicle points downward and forms the root. The other end of the radicle turns upwards, gets longer, and brings the seed-leaves up out of the ground so that these leaves get larger in the light and air.

Discover why the cotyledons of the squash are green and those of bean not.

In the *Squash*, lead the children to see that the nourishment (albumen) in the flat seed-leaves is quickly used up in making the stem longer, in forming many new roots. The seed-leaves of the squash come *above* ground and grow into *useful green leaves* that take in nourishment from the *air* just as leaves do.

The seed-leaves of the *Bean* are much more full of nourishment than those of the squash; and though they are carried up into the air by the lengthening of the little stemlet, they never become useful green leaves.

These leaves may get a pale green color but never green like those of the squash, because they never become real leaves, never do any *breathing* for the plant. All they do is nourish the young plant and then die off.

In the *Pea*, the use of the seed-leaves or cotyledons is for storage alone. They are thickened into two hemispheres.

The stemlet does not lengthen at all, it merely sends out roots from the lower end, develops a strong bud (plumule) from the upper end. The seed remains unmoved

underground. These seed-leaves *never* come above ground. The plumule grows and produces the stem of the plant.

Compare the development and structure of the seeds suggested above with those of the morning-glory and four-o'clock, and learn the classification into albuminous and exalbuminous seeds.

We have said that the white substance in the cotyledons of the bean and pea is called *albumen*. This albumen was made by the old plant during the summer. At first it was a sweet milky substance, then that it would keep all winter, it was changed into a starchy pulp, and this hardens. When a seed is planted, this changes back to a sugary substance again.

In the *bean, pea, and squash*, the albumen is stored up in the seed-leaves or cotyledons. Thus the seed holds only seed-leaves and radicle.

In the morning-glory the food or albumen is not stored up in the seed-leaves, or cotyledons, but outside of the embryo. The embryo (radicle and seed-leaf) is small and coiled up and around it is its food.

In the four-o'clock, the broad cotyledons with the little stemlet almost *encircle* and *enclose* the floury albumen, instead of being *enclosed in it* as in the *morning-glory*.

Leaves

PREPARATION—Have as many natural specimens as possible, at least one in the hand of each child. Pictures, and outline drawings will assist in the work. Use the black-board constantly to illustrate the points developed.

PARTS OF LEAVES

METHOD—Show a leaf, ask what it is, also what part of the plant it is.

To draw out the different parts, ask whether the leaf is the same throughout. Point to the stem, or stalk, the blade, and the stipules. To get the word *blade*, we can refer to the part of the penknife called the *blade*.

Draw the pupils' attention to the little leaves or *stipules* at the end of the stem. Explain that all leaves do not have these *stipules*; that some have no footstalk, or *petiole*, and then the blade rests directly on the stem of the plant. The *blade* is the necessary part of the leaf.

Kinds of Leaves—Draw attention to the leaves that have but one blade (simple leaves); and those that have more than one blade (compound leaves). **Require them** to tell whether their specimens are simple or compound, and to pick out the different kinds on the chart or board.

Parts of Blade—In specimens, show the base, apex, and margin. Get the name *base* by referring to the part on which the leaf rests, the word *apex*, for the part opposite the base, the word *margin* for the edge or rim, the word *surface* for the upper and under parts of leaves.

Point to these different parts and let the children tell the name of each.

Have the pupils hold their leaves to the light, look through them to see the little pipes, or veins, that carry the sap.

Have them notice the main rib (midrib, or midvein). Tell the pupils that all leaves have not their veins arranged in the same way. The way in which the veins are arranged is called the *venation* of the leaf.

As a review place questions on the board and obtain written answers.

The Structure of Leaves

The Epidermis.—Take a calla leaf and with a sharp knife lift off the skin. Hold the skin to the light and let the children discover that it is transparent (can be seen through), and does not look *green* as it did when on the leaf. If possible, let the pupils take off the skin of their leaves, and examine it. Give the name *epidermis* to this skin.

Green Pulp.—Now draw attention to what is left, or what was under the skin. Ask them its color, and whether soft or hard. Give the name, *soft green pulp*. (Technical name is *perendum*.)

Framework.—Scrape off, or lift off, the green pulp to find that which gives the leaf its shape; namely, the veins, or framework. Lead them to see that it is woody in its nature. Ask of what use this framework is to the leaf, and what the leaf would be like if it had only skin and green pulp. In this way obtain the fact that it gives form and strength to the leaf. Refer to the use of the veins to carry sap, and why there are so many veins; namely, to bring the sap to all parts of the leaf. (Technical name of this framework is *cellulose*.)

Notice that the green pulp is both above and below the woody fibre, or framework. If you soak a lily or iris leaf in water, the green pulp will separate from the woody fibre, leaving the framework free for the children to examine.

Breathing Pores.—If possible, place the epidermis under a microscope and let the pupils notice the little holes all along its upper and lower surface. Give the name *breathing pores*. Tell the children that there are 70,000 of **these** little openings to every square inch of surface on the leaf. (Technical name *stomata*.)

The air passes from the atmosphere outside to the inside of the leaf through these pores. They help the leaf in breathing.

Kinds of Venation—For this lesson see that you have both net-veined and parallel-veined leaves among your specimens. Use the blackboard to illustrate the different kinds of venation, or veining.

Net-Veined.—Draw attention to the *midvein*, then to the *veins* branching off from it, and the *veinlets* branching from these veins. Refer to the likeness this interlacing of veins bears to the threads of a *net*, and tell them that a leaf with a veining like this we call a net-veined leaf. (Quince and maple leaves.) Ask the pupils to tell you what you mean by a net-veined leaf.

Parallel-Veined—Show leaves having parallel-veining. Draw this veining on the board. Lead the children to give the name *parallel* to this arrangement of veins. (Calla, Indian corn.)

Have children tell whether their specimens are *net-veined* or *parallel-veined*, have them pick out the different kinds of veining in the leaves on the board and chart.

Require them to tell you the difference between *net-veining* and *parallel-veining*.

The children will notice that all *net-veining* is not alike. In some the main *veins* spring from the two sides of the *midvein* like the plumes of a feather, and these are called feather-veined (pinnately veined); while in others there are three or more main ribs rising at once from the place where the footstalk joins the blade, and diverging like rays from a centre (as in maple, currant, grapevine), called radiate or palmately veined.

Show that parallel-veining is divided in the same way. In the *lily-of-the-valley* and *Indian corn*, the veins run

parallel from base to apex; while in the *calla* and *banana*, the veins run parallel from the midrib to the margin.

WORK DONE IN THE LEAVES

The green pulp that we spoke of before is made up of many, many little waxy grains. These grains are in the leaves, the stem, and all the parts of the plant that are exposed to the air. (These waxy grains are called chlorophyl.)

The layer of this green pulp on the top of the leaf is darker than that of the under side of the leaf. This well-packed top lets the sun act on it, and the bottom lets the air come through the breathing pores and go through the leaf. The skin protects the green pulp from the too severe effect of the atmosphere.

The little openings, or breathing pores, of the leaf are of great use. Under the microscope, we can see that they have little lips around them. When light falls on the leaf, these open out to let more air enter the leaf; when the light is taken away, the lips draw together again. Now we see that light affects the breathing of a leaf.

Leaves need water, air, and sunlight to help them do their work.

Water—The roots draw water from the ground, and the stems carry it to the leaves. Leaves also take in water from the air they breathe. (You have taught them about evaporation, hence they can understand that air contains vapor.)

With the water, the leaves also take in gases. You would not wish to drink water that had stood long in a room where people were living. It would not be pure, because the bad gas in the air the people breathed out has been taken up by the water.

Now the air is full of this gas and leaves breathe it in. The water that comes up from the roots also brings some of this gas from the soil. (Manure helps fill the soil with this gas.) (Technical name of gas is carbon-dioxide.)

Besides the gas, the water from the roots also brings in earthy matter, (alum, iron, salt, potash, lime, and sulphur.) You could not see these in the water, they are dissolved in it. (Refer to salt put into water to show what you mean by dissolved.)

Air—This comes in through the breathing pores and brings several gases and vapor.

Sun—All this that the plant took in from the soil and the air is called crude sap. It is taken to the leaves where it is sent through the whole leaf to be exposed to the light of the sun.

Work of the Leaves.—Most of the water in the leaves is evaporated from the leaves by the heat of the sun, and passes out through the breathing-pores.

In the sunlight, the green pulp of the leaves changes all this sap (earth, air, water) into *vegetable matter*, or *plant life*. Hence plants have many leaves and need much sunlight to make them grow. This new matter made in the leaves is dissolved in the sap and forms a liquid like mucilage. Now this new sap goes to all parts of the plant to make it grow.

From this you see that the leaves make the new matter for the plants, and are very useful.

FLOWERS

PREPARATION—Many specimens, one in the hands of each child. Choose *complete flowers*. Fruit blossoms (apple, peach, pear, and cherry), the wild rose, single pink, St.

Joseph's lily, morning-glory, and aster are best. Drawings of the various parts to be used.

Parts of the Flower.—(Use wild rose). With specimen in your hand draw attention to the parts of the flower. Note the outside green cup, or *calyx*, which like a cup holds the colored part. Notice that it is generally *green*. Take this cup away and let all see the colored part, or *corolla*. Tell that this is called a crown, because it is so bright and pretty.

Take off the corolla, and let them see the thread-like parts. Even in these thread-like parts, there is a difference to be noticed. To the central thread-like part give the name *pistil*, and to the others around it, the name *stamens*.

Let the pupils take their specimens as you direct, calyx, corolla, stamens and pistils. As they do, let them name each part. Refer to charts and have names of parts given.

Sepals—Let them pick up the green cup, or calyx, that they took off and separate it into its parts. These are the leaves of the calyx and are called *sepals*.

Petals—Take the corolla, separate it into its parts, or leaves. Call each leaf a *petal*. Children have often used the term rose petal.

Stamen—To teach the parts of the stamen, draw an enlarged stamen on the board, also let the pupils notice those in their own specimens.

Lead them to notice the long stem (filament), the yellow dust (pollen), the top, or little pollen holder (anther). They have often seen the pollen of flowers.

Drill on these parts of the stamen.

Pistil—Use drawings as in above.

Draw attention to the rough top (stigma), the stem (style), the bottom (ovary, or seed-vessel). Let them open the ovary and see the little ovules (future seeds).

Drill on these parts of the pistil. Review all these parts of the flower, and let the children tell what each part is.

Peduncle—Last of all, notice the flower stem, give its name peduncle. Note the enlarged head of the stem just where the flower rests. Give the name *receptacle*, the part that receives the flower.

Uses of the Parts of a Flower—For this lesson see that you have a few *buds*, also a complete flower for each child. In the absence of natural specimens, use drawings.

Tell the children that there is nothing created that has not some special use, some special work to do; hence each part of the flower has work to do.

Show the bud, note its color. Show one that is unfolding, notice the colored part gradually coming out. Here they can see the use of the green calyx. It protected the corolla, till it was ready to come out. Ask them to tell the use of the calyx.

As the corolla opens out, the stamens and pistils come to view, hence the corolla protected them. We call the *calyx* and *corolla* the *floral envelope* because as the envelope protects the letter, they protect the *inner* parts of the flower.

Call attention to the beauty and fragrance of the corolla, and thus gets its other use—to please us. It also draws the bees and insects to the flower, and this, we shall soon see, is a help.

By drawing attention to the different shapes of flowers, to some that have sepals and petals (rose, pink) and others that have no divisions to their calyx and corolla, lead the pupils to see that sepals and petals give variety to flowers and thus please us.

Now take the *stamen*, note once more its parts. Refer to the pollen. Tell them that if we had no pollen, we would

have no seeds, hence the anther (pollen box) is very necessary to hold this yellow dust for us. We could do without this stem (filament) to hold the pollen-box, but the other parts we must have. Some anthers have no stem, and rest on the corolla. Dwell on the use of the anther and pollen.

Last of all, we shall take the *pistil*. Point to each part and get its name. Require them to examine the stigma and see that it is quite rough. If it were not, the pollen which falls on it would be blown off. This *stigma* then receives the *pollen*.

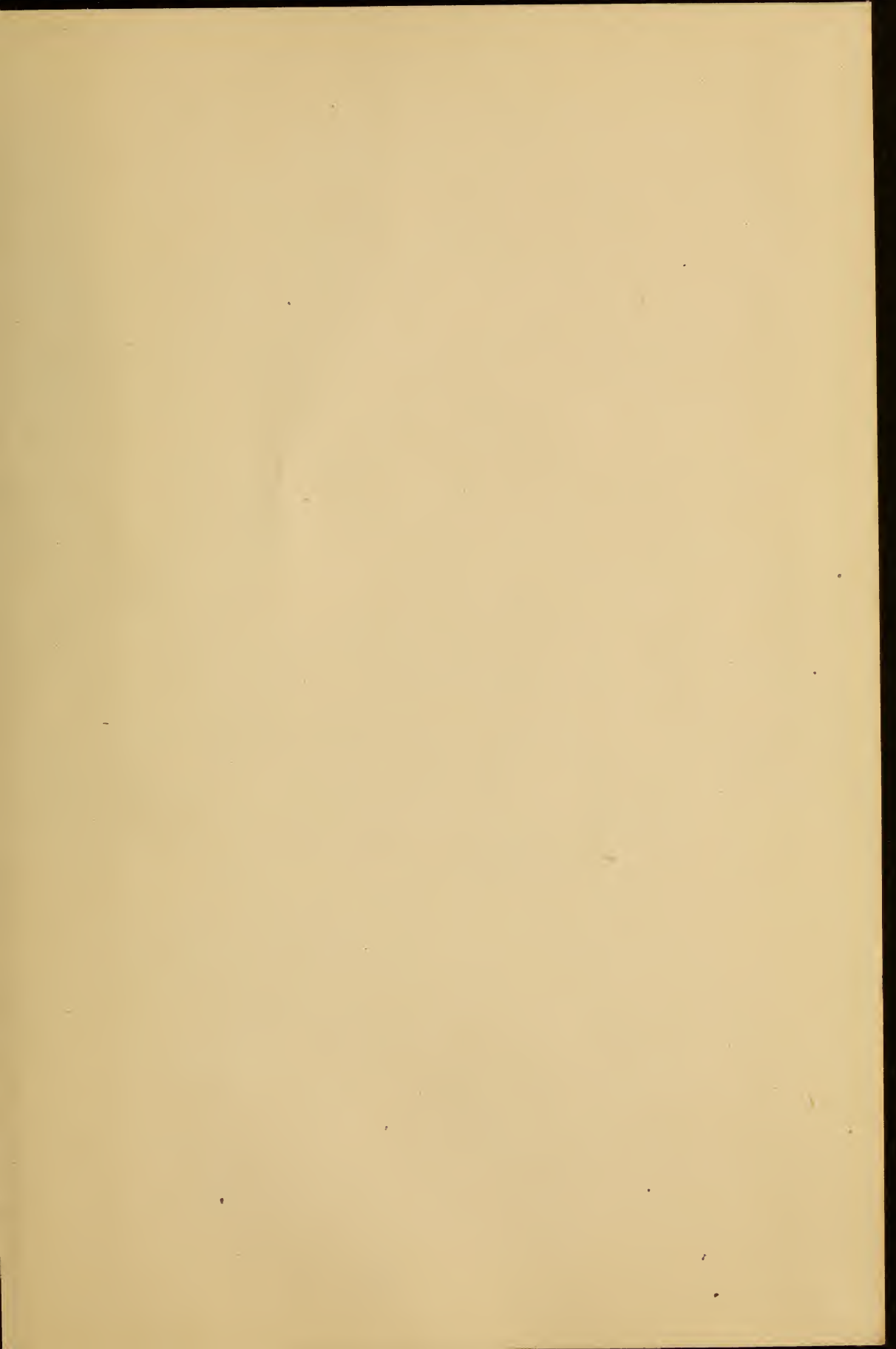
The little style holds the stigma but we could do without it.

Recall to their minds that they saw ovules (little seeds) in the ovary, hence the ovary (seed holder) is to hold the seeds.

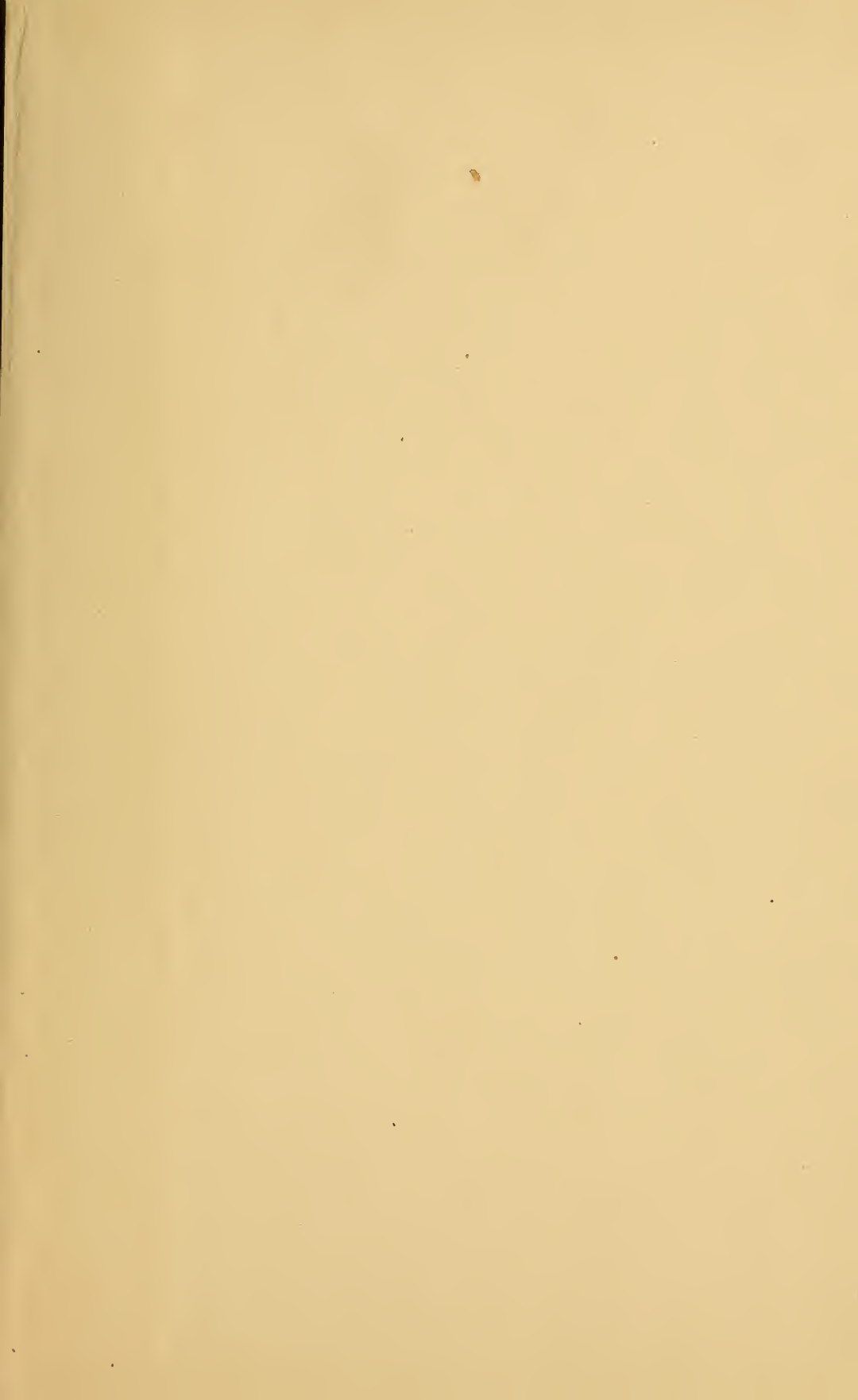
The pollen must get to the stigma or it cannot get to the ovary to ripen the seeds. The wind, the birds and insects, all help to bring it to the stigma.

You cannot understand how the pollen ripens the seed, but learned men tell us each little grain of this yellow dust, when it falls on the stigma, sends out a little thread, which grows long and sinks down into the pistil till it gets to an ovule in the ovary and it makes this ovule ripen into a seed. Only God could make it do this. We must have pollen-boxes and seed-holders or we cannot have seeds.

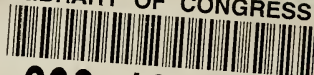








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